

national

SAFETY NEWS

AUGUST 1953



SAFETY—jet propelled

THIS MONTH

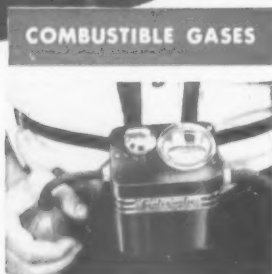
A Message to Young Engineers
Radioactive Guards
Measuring Safety Performance



Put the Squeeze

on Atmospheric Hazards with these M·S·A PORTABLE INSTRUMENTS

Scouting out suspected areas that may contain harmful and dangerous combustible and toxic concentrations is an easy, fast operation with these M.S.A. Portable Instruments. A few squeezes of the aspirator bulb draws in the sample, gives you a quick, accurate story on concentrations. The instruments are economical, easy to maintain. Write for details.



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Extra sensitive to benzol concentrations. Detection range—from 0 to 100 parts of benzol per million parts of air. Compact, rugged.



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Indicates CO from 10 to 1,000 ppm in air. Simple to use. Accurate in the presence of water and gasoline vapors. No special training. . . ideal for on-the-spot checking.

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M.S.A. Midget Impinger—for gathering samples of particulate matter.
M.S.A. Dust-Vue Microprojector—for rapid counting also determination of dust particles.
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... his job is to help you.

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WILLSON®
Kover-Mor goggles
Strong...Light...Comfortable

**Try this pair
of nylons for longer,
more comfortable
service!**

For Welders ▶

Willson *Spatterproof*® cover glass protects *Willson-Weld*® filter glass against pitting. (Note four indirect ventilating ports admit ample air but keep out sparks and flashes)



◀ For Chippers

Willson *Super-Tough*® lenses are heat-treated for impact resistance. (Note four screened eye cup ports admit air to keep lenses fog-free)

Kover-Mor Welding and Chipping Goggles fit easily over larger-frame prescription glasses—use standard 50 mm. round lenses—offer these other new Willson developments:

1. Lightweight nylon offers *highest strength/weight ratio* known for goggle cups; non-flammable; won't conduct heat
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3. Standard 50 mm. round lenses make it unnecessary to stock odd-size replacement lenses
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5. *Comfortable fit* is assured by adjustable two-piece head-band, leather bridge curtain and rigid metal top bar



Notice the rigid metal top bar

—standard on Willson Kover-Mor® Goggles. Makes them easier to handle—holds them firmly in place.

Ask your Willson distributor for new Kover-Mor® Welding or Chipping Goggles —strongest lightweight goggles you can get — or write for new bulletin.

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WILLSON PRODUCTS, INC., 205 Washington St., Reading, Penna.

SAFETY NEWS

Published monthly by National Safety Council

AUGUST 1953

THE COVER: The tremendous suction of the Sabre Jet's intake is guarded during ground tests. (North American Aviation).

IN THIS ISSUE

Safety—Jet Propelled— <i>W. G. Johnson</i>	18
A Message to Young Engineers— <i>John Cost</i>	20
Where's the Logic— <i>Robert D. Gidel</i>	21
How Safe Are Your Slings?— <i>Walter C. Richards</i>	22
Looking for Trouble— <i>Homer G. Jordan</i>	24
No Substitute for Cleanliness.....	26
Approach Shots (Diary of a Safety Engineer)— <i>Bill Andrews</i> ..	28
Amyl Acetate— <i>Data Sheet D-208</i>	30
Radioactive Press Guards— <i>James H. Heacock</i>	32
Cases for Comment— <i>Robert D. Gidel</i>	34
How Good Is Our Performance— <i>David N. Edwards</i>	36
Xylene and Toluene— <i>Data Sheet</i>	38
Safety Measures on Logging Craft.....	42
Safety's Big Week.....	50

DEPARTMENTS

Editorial.....	17	Personals.....	62
Lighter Side.....	29	For Distinguished Service.....	64
The Safety Valve.....	35	Obituary.....	75
Small Businesses and Associations.....	40	Reader's Point of View.....	80
Accident Barometer.....	44	Safety Posters.....	98
Green Cross News.....	48	What's New?.....	101
Safety Library.....	52	Calendar Contest Winners.....	105
Coming Events.....	54	New Products.....	107
Industrial Health.....	56		

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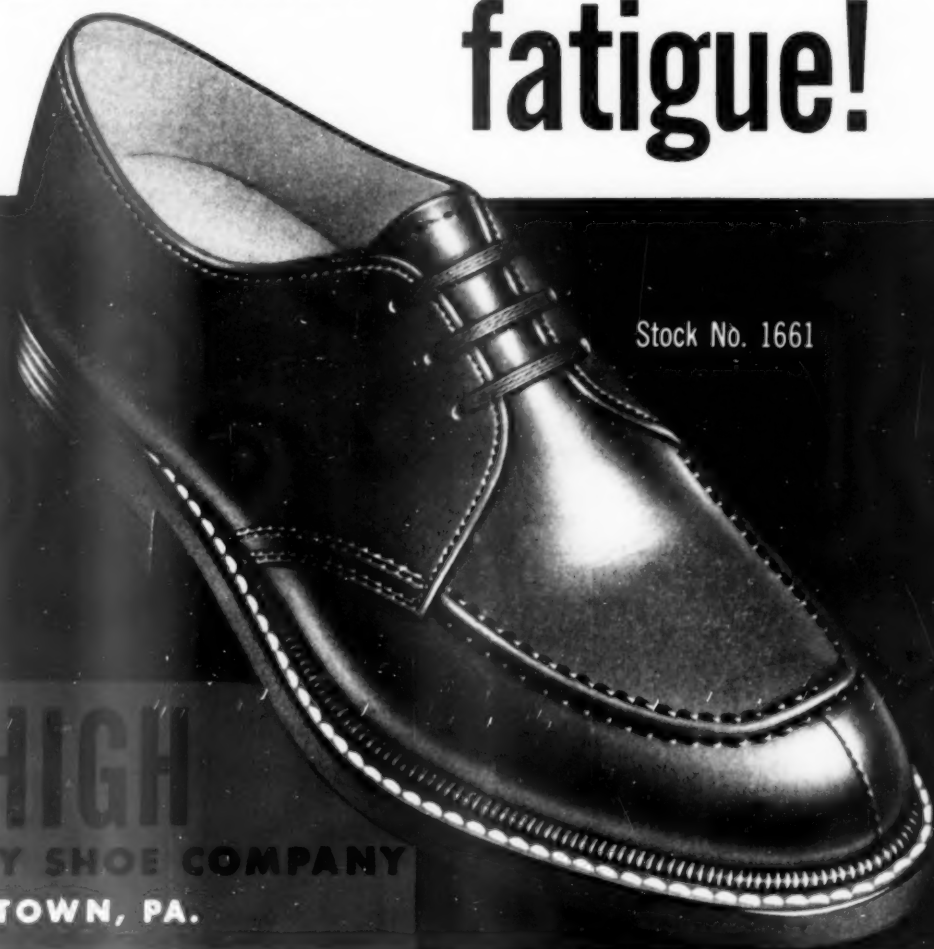
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Statements and opinions advanced in signed articles are personal expressions of the authors, not necessarily those of the National Safety Council.

this foam rubber cushion

Every time you take a step your full weight lands on your heel bone. In ordinary shoes, this transmits a sharp shock through your entire body. It's this walk-shock that causes excessive fatigue. And a tired workman is ripe for accidents. In this new Lehigh safety shoe, a soft, springy cushion of foam rubber is sandwiched in leather under the foot. It *sponges up* all the jars and jolts of walking — keeps men fresher at 5. It's a new safety bonus in Lehigh safety shoes. Order a few pairs for your men to try on. One step in it sells it!

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job
fatigue!**



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- ☐ on steam-heated rubber processes.

- ☐ on boiler repair jobs.

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- ☐ motors, generators, switchboards.
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- ☐ general man cooling.
- ☐ around cracking stills.

- ☐ exhausting welding fumes.

- ☐ stirring up stagnant air wherever men are working or material is drying.

- ☐ drying of walls, sheets, etc., after treated with coating material.

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National Safety News, August, 1953

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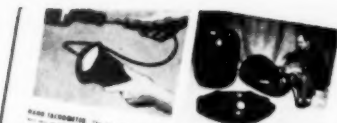
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SEALS
HOLD
GLASS
PANELS
SECURELY**

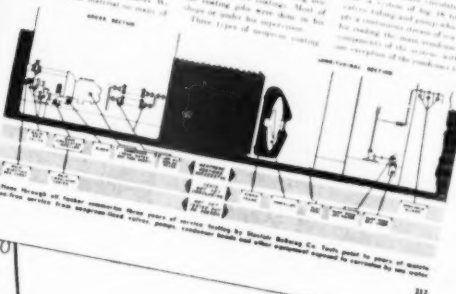
FACTS ABOUT NEOPRENE FOR THE ENGINEER

SINCLAIR EVALUATES NEOPRENE COATINGS

By W. H. DAMONTE and T. T. WILKINSON

Mr. Damon, manager of the Sinclair Refining Company, and Mr. Wilkinson, an independent engineer of the Sinclair Refining Company, have been studying the use of neoprene coatings in the Sinclair Refining Company's Engineering and Shipping Division. They report on the results of their study in this article.

From the fact that the Sinclair Refining Company has been experimenting with neoprene coatings in its various refineries, it is evident that the material is of great value.



Neoprene has been found to be a most valuable material for use in the Sinclair Refining Company. It is a versatile material which can be used in a variety of applications. It is resistant to oil, grease, and other liquids, and it is also resistant to heat and cold. It is a must-have for anyone who works with liquids or in extreme temperatures.

The neoprene coating is a most valuable material for use in the Sinclair Refining Company. It is a versatile material which can be used in a variety of applications. It is resistant to oil, grease, and other liquids, and it is also resistant to heat and cold. It is a must-have for anyone who works with liquids or in extreme temperatures.

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PRECISION



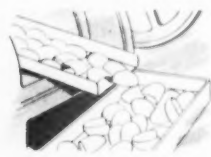
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COMPRESSION



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Precision is the watchword we live by here at Safety Box Toe Co. ... from the conception of the basic idea on the drawing board all the way up to the finely engineered safety steel toe. Number one on our production parade is the expert selection and painstaking analysis of the steel that goes into our products. Later, each individual steel toe is austempered to assure uniform hardness and toughness so vital to modern foot safety.

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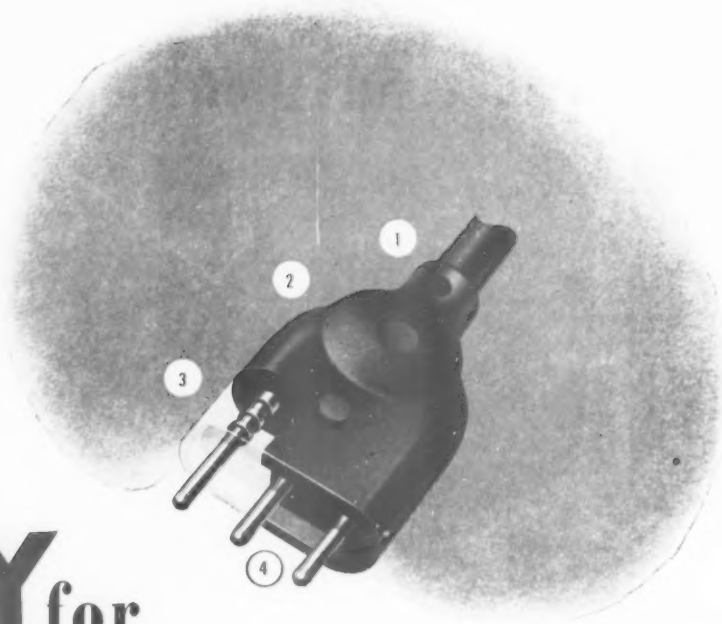
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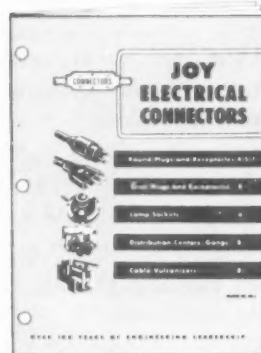


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There's only one accurate way to measure value . . . and that's by the old-fashioned yardstick of performance. The best isn't always the highest priced, nor is the least expensive the cheapest. Electrical connectors are no exception . . . however the plugs and receptacles JOY has developed for industry are exceptional values in long range trouble-free performance. Molded as one-piece Neoprene jacketed units they can't crack or become out-of-shape when dropped — won't get mushy when smeared with grease or oil — and are absolutely watertight. When connected, mating beads or lips (5) shield contacts from dust or metallic particles in the air.

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Even on places as difficult as knuckles, Stickband elastic bandages hold fast. They give and take with the movement of the joint. Here is long lasting, sure protection for small wounds.



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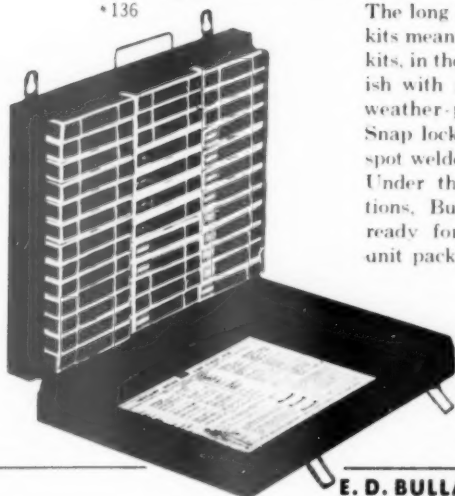
*110



*116



*136



first aid kits

In times of emergency when seconds count, Bullard safety green unit first aid kits prove their value. Flick open the welded snap locks, exposing the clearly marked unit packets, the right treatment with the right application is instantly at your fingertips.

built to last

The long life of Bullard first aid kits means savings to you. These kits, in the new Hammertone finish with removable gaskets, are weather-proof and dust-proof. Snap locks and back hinges are spot welded to prevent air leaks. Under the most rugged conditions, Bullard kits are always ready for instant use. Special unit packs are available.

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Write for descriptive literature on first aid or other Bullard safety equipment.

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Hexachlorophene antiseptic soap

This liquid soap not only cleanses the skin but guarantees an effective bactericidal action. It sterilizes as it cleans and is fast and easy to use as well as economical.



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EVERYTHING
BULLARD
IN SAFETY

E. D. BULLARD COMPANY, 275 Eighth St., San Francisco, California



Six-ton boiler an **EASY LIFT** *for Bethlehem Sling*

This big boiler weighs 12,000 lb., is 14 ft. long, and 48 in. in diameter. A cumbersome load, the sort that has to be rigged with forethought and care. But the Bethlehem wire rope sling, perfect for the kind of lift involved, handled the job easily—just as it handles similar assignments all day long.

The plant management has been using this type of sling for years. The one shown here is a Bethlehem 252, an equalizing sling with double-rope legs. The rope is $\frac{3}{4}$ -in. Purple Strand, Bethlehem's tough, fatigue-resisting improved plow grade. Each leg has end attachments consisting of hook and thimbles.

This of course is but one of the many types of slings that

Bethlehem makes. Perhaps it will fit your own plant needs to a T; perhaps it won't. There may be others more suitable for your kind of work. But please remember—whatever your lifting problems, Bethlehem can make the sling that will do the job. Whether you want single-part, braided, grommet, bridle, or special slings, we supply them—tailor them all to your set-up.

If in doubt, by all means call for a Bethlehem engineer. He is particularly well qualified to serve you, and his help will be freely given, without cost or obligation on your part.

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MAKE THE TOUGH LIFTS EASY



* HERE'S COMPLETE PROTECTION

* PLUS BUOYANT COMFORT
THAT HELPS LIFT PRODUCTION



S-4300 — Good-looking shoe in turftan leather in the smart U-wing design. Blucher pattern for snug-fitting comfort. Leather-lined steel toe cap. Sole of Nitro-crepe Neoprene for light weight and long wear.

**NEW! Safety shoes with soles
30% lighter than crepe rubber!**

Workers who drag a lot of dead weight around on their feet are apt to drag down production. That's why Thom McAn designed this safety shoe, the welterweight champion on any factory floor.

The dressy lines of this shoe, the smart U-wingtip, the snug-fitting blucher style will help to make it one of Thom McAn's most popular safety shoes. You don't have to "sell" your workers on Thom McAns!

Send for full information on these 2 plans today

1. Store service through your local Thom McAn store.
2. Plant service, where there is no local store, or where you wish to use your own department.

Note, especially, the section under Plan 1, entitled "Four Ways to Get Workers to Buy Safety Shoes."

Write to: Thom McAn Safety Shoe Division
25 W. 43rd St., New York 36, N. Y.





Long range, solid cone of Rockwood WaterFOG snuffs out fire.

"Little Mo" knocks 'em down

He likes to go to blazes.

"Little Mo"—a small fire truck that's packed to the hilt with Rockwood fire-fighting equipment—streaks to fires, knocks 'em down and quenches them in seconds. Can be operated by one man, if necessary!

In the test above, fuel in a pit under the tank cars was set on fire—and more fuel poured on top of the cars from pipes. This, too, was ignited and the blaze given a minute's start. In rushed "Little Mo"—and out went the fire in 45 seconds, choked off by Rockwood WaterFOG from Rockwood's Remote Manual Control Turret. What's more, 10 inches of water still remained in "Little Mo's" 200-gallon booster tank, after the fire was out.



It's loaded! "Little Mo's" equipment includes: 4 stage centrifugal pump with electric primer, 200-gallon booster tank, Rockwood Dual Suction Proportioning System for FOAM and "Wet", Rockwood Remote Manual Control Turret controlled from within cab, Rockwood Ground Sweep Nozzles, Rockwood Remote Control Ball Valves, 2 Hannay reels with 200 feet of high pressure hose with new Rockwood High Pressure Handline Nozzle on each reel.

Thanks to Rockwood portable fire-fighting equipment, even a small truck like "Little Mo" can battle fires with powerful efficiency. The Turret Nozzle, alone, discharges solid water stream, WaterFOG, FogFOAM, solid FOAM, "Wet" solid water, and "Wet" WaterFOG! Rockwood engineers water to cut fire losses.

Leading manufacturers of fire trucks will install Rockwood Fire Fighting Products at your request.

ROCKWOOD SPRINKLER COMPANY



Engineers Water . . . to Cut Fire Losses

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Title
Company
Street
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THE LONGEST WEARING SAFETY SHOE EVER MADE

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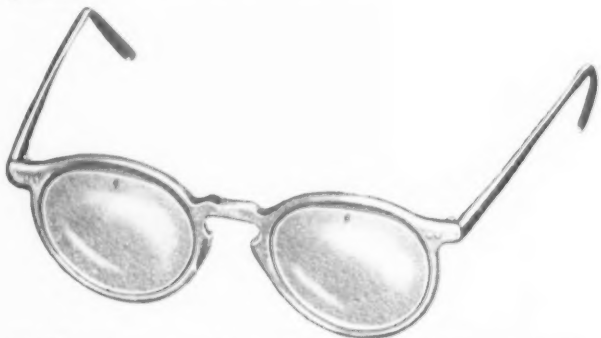
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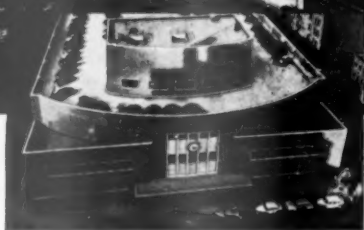


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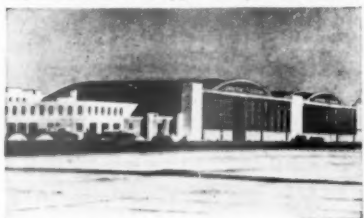
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NATIONAL SAFETY NEWS

AUGUST, 1953

No Utopia

"NO SHIP will ever sail into a strange harbor and find there a happy society lacking the raw materials of tragedy," said Dr. Arthur E. Morgan, former president of Antioch College.

Even if we could leave behind our mechanized civilization and live in primitive, pastoral simplicity where every prospect pleased, there would still be opportunities for tragedy.

We might get away from the automobile and other mechanized forms of transportation which figure in the headlines all too frequently. We might swap our powered factories for a more primitive system of handicrafts. But could we get away from all forms of disability and premature death?

The net result might be largely a change of hazards. Just as primitive people have little resistance against diseases of civilization, the sophisticated modern man is easy prey for the strange bacteria of an unfamiliar environment.

And even in a balmy island paradise nature goes on an occasional rampage—with hurricanes, earthquakes and tidal waves bringing death and destruction. In many sections of our own country, tornadoes have brought havoc comparable to the blitz of World War II. And floods are a recurring menace in vast areas along our inland waterways.

Perhaps in time we shall learn to control these forces, or at least minimize their destructiveness.

There are many diseases which still baffle medical science. In our own time they may be brought under control.

But there are many man-made causes which take a tremendous toll of life and property, and these are largely preventable. Prevention requires a degree of self-discipline which goes against the human inclination to follow the downhill path. And discipline imposed from without is too often clumsy and ineffective.

The forces of organized safety are working to direct humanity's revolt against tragedy into constructive channels.

Language Up-to-Date

EVEN a casual study of Shakespeare and the King James Bible will show how our language has changed since 1600. Many words are no longer in current vocabularies, some have lost their original meanings, and, of course, a vast number of new terms has been added by our progress along many lines.

The safety glossary has also seen some changes in forty years. For years *lost-time accident* was the accepted term for mishaps that counted in the records. Now they are officially and more correctly described as *disabling injuries*.

The *Transactions* of National Safety Congresses were originally called *Proceedings*.

Flammable, a word long used by accident prevention and fire prevention organizations in preference to *inflammable*, has at last received official recognition in Webster's New Collegiate Dictionary. The argument was that the prefix had one meaning when attached to sanitary and the opposite in front of flammable. Besides, the newer term is one syllable shorter.

Of late there has been considerable objection to labeling all mishaps of the job *industrial accidents*. *Occupational* and *work injuries* are being used increasingly, the choice being governed largely by the term which makes the passage read more smoothly. A representative committee organized under American Standards Association is now studying standardization of terms.

* * *

ACCIDENT PREVENTION is not news; it is work. Accident prevention is the steady, day-by-day grind in the average plant to see that men and women do their jobs with reasonable safety through good work habits, through proper tools and equipment, and through the use and maintenance of safeguards. The prevention of accidents is not "newspaper news." But it is "good news" for those who reap the benefits of that effort.

R. B. MORLEY

Safety-JET PROPELLED



By W. G. JOHNSON

Back of North American's Award of Honor is a safety program as high-powered as a Sabre Jet

THE Sabre Jet flies and fights in a winning way because it's ultra modern, yet based on tested ideas and principles. North American Aviation, the Sabre Jet's father, mother and midwife, has a safety program which is as sleek, smooth and hard-hitting as a Sabre Jet. At North American, safety's up-to-date—yet firmly founded on a bed rock of good management principles.

I went out to North American's main plant at International Airport, Los Angeles, to present an Award of Honor for the plant's 1952 record. I saw some of the reasons why that plant could

chalk up a 1952 frequency rate of 1.9 and a severity rate of .30.

The Award of Honor was to be received on behalf of the plant by Mr. J. S. Smithson, vice-president for manufacturing, Dick Wilkins, N.A.A.'s chief safety engineer, and I went over to Mr. Smithson's office.

I'm not so sure that Mr. Smithson wants his character analyzed in public print, particularly on the basis of a short talk. However, since I feel that he typifies sound management action for safety, I'll take my chances.

Mr. Smithson serves as Chairman of N.A.A.'s Executive Safety Committee, and Dick Wilkins had the highest praise for his work in that capacity. (I wouldn't be reporting Dick's sentiments if he

hadn't praised Mr. Smithson's work!) However, it wasn't that which impressed me; it was Mr. Smithson's description of the thinking that he had done prior to a recent talk in Ohio.

An approximate quotation of his comments is, "As I reviewed the gradually changing role of the supervisor in industry, I started with the situation many years ago when we didn't define very exactly the position of the supervisor. Then we went into a period of accelerated organization of our employees into unions. We weren't at all certain whether the supervisor was a member of management or not. Then, in our company and in most others, the thinking crystalized, and we said that the supervisor was part of the management group. The thing we have tried to do is, not just give lip service to that idea, but carry it out with all of its implications. First of all we try to give the supervisor the benefit of the best possible training and advice, and any necessary tools and assistance he needs. But, then we don't just say that he is responsible. We insist that he accept and carry the responsibilities of his job."

"On occasion, a supervisor comes crying to me. Maybe it's a safety problem or it may be some other operating problem. I simply tell him that we have placed a supply of crying towels at my secretary's desk, and refer him to her."

"I am not denying that any man may need more help or more assistance or more advice on the

W. G. JOHNSON is Manager, Membership Department, National Safety Council.



Above: J. S. Smithson, North American's vice-president for manufacturing, receives the National Safety Council's Award of Honor from W. G. Johnson.

Right: Sleek Sabre Jets get finishing touches and final checks before delivery to the U. S. Air Forces.



job, and we do try to give that. However, I am emphasizing that, in the last analysis, the supervisor must discharge his responsibilities. He alone can decide how he will best do his job. Our policy is a little tough, but it builds some mighty fine men! That basic approach to supervision has been responsible for our safety record, as well as our productive record."

When we left Mr. Smithson's office I had the feeling he'd be an awfully nice chap to have as a friend, but that he might not be so comfortable if you were trying to "just get by!"

My schedule in Los Angeles was pretty crowded, because my principal job was to corral some non-member mavericks. However, Dick Wilkins and I did take a couple of hours to go through the plant and talk over some highlights of North American's safety program.

As soon as you enter the plant you are impressed with the housekeeping. The housekeeping program is a separate activity administered by the company's industrial engineering staff. It's apparent that good housekeeping is making an important contribution to production efficiency, and it most certainly is giving the safety program a fine running start.

As we went through the plant I noticed some excellent posters produced by the company staff.

Later on Dick Wilkins explained exactly how their poster program works. For this year they set down the twelve principal hazards they wanted to attack. Each month a large (17 x 23 inches) and a small (8½ x 11 inches) poster are produced to hit the specific hazard selected for that month. The two posters are identical. The large ones go on the 120 boards maintained by the Safety Department, and each of 400 supervisors gets one of the small posters to be used as he sees fit in his department. (The posters stay up two weeks; the boards are then used in the Conservation program.) The styles of the posters will be similar throughout the year to maintain continuity. Thus, the poster program has all the elements of a well planned mass advertising campaign — planned

objectives, repetition, timeliness, and impact.

Safety Committees, with a representative from each department, are an important factor in N.A.A. safety work. The Safety Department has prepared an excellent booklet describing the work of the safety committee. I couldn't help but note that the booklet emphasized the importance of the safety committeeman reporting unsafe conditions or unsafe practices directly to the supervisor. As the booklet emphasized, the supervisor is most often in a position to take immediate action to correct the hazard.

The safety committeeman has the specific responsibility of giving each new employee his "safety introduction." The committeeman has a supply of a clever, cartoon

— To page 70

A Message to Young Engineers

By JOHN COST

The engineer—regardless of his specialty—has an all-encompassing responsibility to safety. It is foresight—the ability to plan with prevention in mind

FOR a student there is always "atmosphere" around a campus. And while you are here striving to give your assignments your best efforts, there is always the mysterious uncertainty of how most of it will fit into your life's work. I suggest that searching self-analysis be critically performed to insure that adaptability is one of your foremost characteristics.

Colleges make an effort to prepare students for the industrial atmosphere which they will meet, but until they are on a payroll and matching the competition, extent of the transition is not fully realized. From the aura of vagueness to cold realism is sometimes a difficult adjustment. Any special talents you have will soon be highlighted and you will find yourself gravitating where you can do the company the most good, which may not always be what you had in mind.

There are many kinds of engineers but, by and large, a basic concept underlies them all. They are responsible for economic and efficient use and operation of natural resources and capital equipment in the best interest of their fellow human beings. They are usually not very dramatic about it

and persons engaged in less valuable occupations with good publicity invariably are made to appear more important. The economic responsibility has long been recognized because it has been said simply that engineers should be able to do for \$10 what any one else can do for \$100. This is dollar-control for efficiency.

So it has been down through the ages; the persons with fertile, active, inquisitive minds always prying into phenomena about them, trying to harness them and always trying to stretch and improve resources and materials at hand for the ultimate good. Such activity in times past has brought about modern improvements which we enjoy as the normal thing.

Survival and Conservation

Engineers are beginning to realize their responsibilities in the direction of humanitarian solicitude and that humans are our greatest natural resource to be conserved. Consideration of others characterizes civilized and free nations. Some feel the engineer should have a higher coefficient of humanics and there are many forces working today to increase the degree to which human relations enter into his calculations. Humanize or liberalize—call it what you will—the experience has been a pleasant one. As a counter irritant, maybe we should consider engineerizing the liberals so mechanical contrivances do not

find them all fouled up and with five thumbs.

Safety in any of its ramifications should not be treated as a new subject, even though it has been made to appear as a recent requirement. Safety is as old as recorded civilization itself. It is mentioned frequently in the Bible and was in the thinking of our forefathers as they framed the Constitution.

As a basic concept, safety concerns survival and conservation. For this reason, the engineer has a responsibility to safety just as he has to many other component responsibilities. With the component of survival in safety, concerning human survival, safety is an imperative moral obligation as regards humanitarian solicitude for welfare of our associates. Risk of disability to workers is an impediment to good industrial relations as well as being a deterrent to production and the unnecessary cause of serious economic loss.

Our accident toll indicates hindsight is an expensive teacher. If the engineer has one all encompassing responsibility to safety, it is foresight—ability to plan with prevention in mind so lives and limbs are spared the necessity for becoming statistics to prove correction is needed.

One special requirement for foresightedness is an open mind. Learn to see with your mind as well as your eyes. If you do not accept things as they are against things as you think they should

JOHN COST is Division Plant Personnel Supervisor, New York Telephone Co., and chairman of the Metropolitan Chapter, American Society of Engineers. This article was condensed from a paper delivered before the Engineering Seniors of Rutgers University, May 7, 1953.

be, you will be an ineffective producer by today's standards.

Must we always wait for someone to be killed or seriously hurt before we can change the existing order? Many times that is so. It seems the record must indicate a "need" for a change. Some people think there always will be fools, so why try to make living fool proof? We must do all we can to make security and efficiency automatic by eliminating every possible booby trap. Inability to see the human failure responsibility in an engineering project is the blind spot which the engineer must accept as his responsibility to overcome.

I have searched through engineering magazines and found publicity on new equipment and tools heavily sprinkled with claims that safety is an important attribute; you can't overlook it. Any engineer in industry knows the consideration given safety today.

Here let me raise a warning finger. Past generations cared little for life and limb and were callous enough to figure loss of life as part of the building cost.

Today's industrialist realizes every penny spent is an investment and there is no profit in avoidable accidents. An engineer can be as smart as a whip and utilize every advantage covered by the book to construct his project, but if loss of life, serious injury or destructive accidents figure in the final cost, he has failed in basic economics and humanitarian solicitude, he has overlooked his responsibility to safety. He lacked foresight.

This fellow is talking in riddles, you say. What could happen wouldn't be outside the permissible engineering error of 10 per cent, would it—so what? Experience shows that it is and is therefore a matter of concern to the engineer.

In recent years work injury experience has been approximately 16,000 persons killed and 2,000,000 others injured in one year in American industrial plants.

—To page 35

Where's the Logic?

By ROBERT D. GIDEL

A LITTLE ONE is born, and a new sovereign rules the household. Immediately, the little bundle in pink or blue becomes the axis of all activity.

Pop, having proven there was more there than meets the eye, lays down an ultimatum that nothing shall happen or be allowed to exist that can interfere with the chances of little Noodnik to survive and develop.

Be careful of those drafts; give him some air; that water is too hot; that water is too cold; sterilize that bottle; you're feeding him too much; he's starving to death; don't leave him in those wet drawers; don't sneeze in his face; stop breathing when you look at him; don't smother him; don't wake him up just to change him; has he got enough clothes on; what's his temperature; did you ever see such an intelligent face; etc., etc!

Woe be it to anyone hurting that baby!

But, what does Pop do? Does he think about the welfare of the kid, as far as Pop's concerned? After prescribing the rules for mother to follow for the day, Pop hops in the car, roars out the drive, and into the street on his way to work.

Pop's a past master at all the tricks. Weaving in and out of traffic, getting the jump at the stop light, second guessing the other guy, cutting off speed demons, passing on the right, speeding through the caution signal, and—he's got that 30-minute drive to the plant cut down to a slick 23 minutes. Of course that's exceeding the limits a bit in business districts and school and residential areas, but he's not stupid like the drivers those limits were set for.

When Pop gets to the plant he's shrewd too. By strapping one of those control buttons down, he's got a smoother operation. By squinting his eyes a little and blinking at the right time he doesn't need goggles. By being light on his feet, he hasn't needed any safety shoes to protect his toes. He also claims to save time by not putting the guard on for that "short run."

Who needs a respirator for just a couple of minutes on that stuff—haven't you got any guts? This old ladder'll do. I can miss that broken step, and that crack in the side isn't ripe yet. No need to stop the machine to oil it. I'll reach in between strokes and give it a squirt. Why keep the floor clean—let it accumulate and I'll clean it all up at once. Anybody can miss that big hole in the floor—etc., etc.

Pop is always the first one at the time clock at quitting time also. He takes the stairs two or three at a time, roars out of the parking lot, and seven caution lights, five tight intersections, 15 weaves, seven stops on a dime, 21 jet-propelled take-offs, eight horn honkings, three grazed pedestrians, two shaved chrome strips, two scared kids on bikes, one angry cop, six passings on the right, three "school crossings," and 937 cuss words later he comes to a stop in his own driveway.

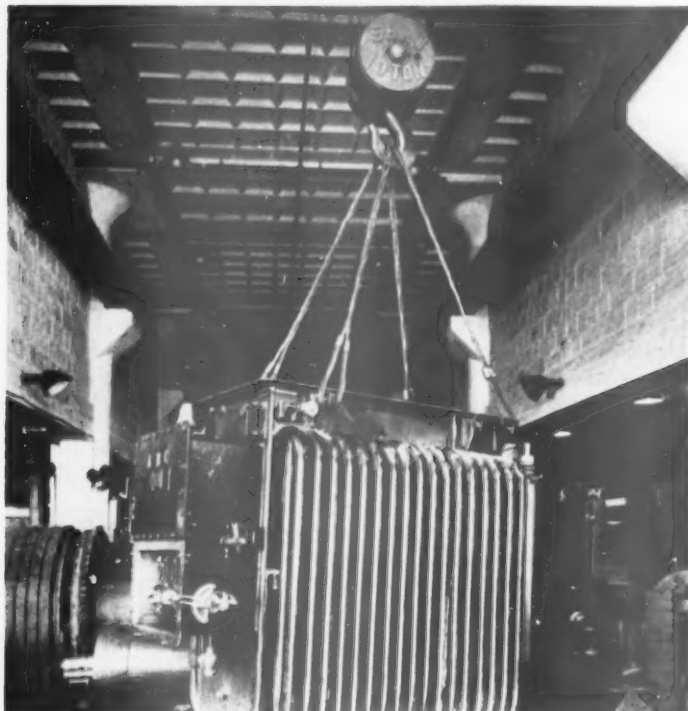
He hops out of the car and yells "where's my boy?" Don't tell me you've let something happen to him! One of these days, yeh, one of these days, "whammo," right in the kisser—if you do. That kid's going to have what I wasn't able to have.

What'd he mean—a widowed mother?

ROBERT D. GIDEL, Senior Engineer, Industrial Department, National Safety Council.

How Safe Are Your Slings?

By WALTER C. RICHARDS



Wire rope slings have rated capacities and with normal use will perform as expected. Here are some recommendations for selection and use.

THE first essential for safe slings is that those of adequate strength be selected. Where two or more legs of a sling are involved, consideration must be given to the important fact that the stress in a sling varies with the angle at which the legs are used.

It is assumed in this discussion that the loads are approximately

symmetrical and in balance, and that the legs are of equal length. If a sling is to be calculated for an unbalanced load—where one leg will handle a greater weight

than the other—this must be clearly indicated. A sketch showing the location of the center of gravity should be submitted to the supplier.

Safe loads for bridle slings are shown in handbooks with legs vertical. These are usually attached to a spreader bar and used to lift locomotive or car bodies. The typical bridle sling is seldom used with both legs vertical. They are generally spread apart as shown.

If the legs are to be vertical, the full safe working load of the sum of the two ropes is available. When the legs are spread at an angle, the allowable safe working load will decrease as the angle increases.

To Calculate Loads

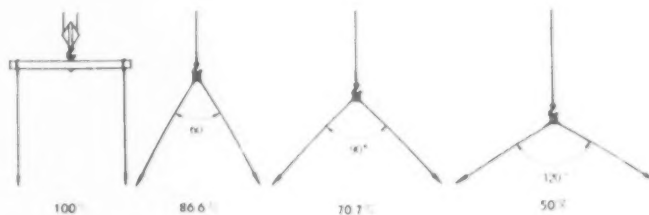
For a sling of given rope diameter the safe working load at 60 degrees, 90 degrees and 120 degrees would be calculated by using the percentages, as shown in Chart 1; or for any angle by reference to Chart 2.

The degree of spread may be designated either by the included angle at the hook, or by the angles made by the legs with a horizontal plane.

In the case of a sling with equal length legs, spread at an angle of 60 degrees at the top, the legs would also make an angle of 60 degrees with the horizontal. If the angle at the top were 90 degrees, the legs would make an angle of 45 degrees with the horizontal. The relationship is based on the law that the sum of the interior angles of a triangle is 180 degrees.

To determine the diameter of rope to be used for given conditions, the stress in each leg of a

Chart 1. How the safe working load of a bridle sling decreases as the angle of the leg spread increases.



WALTER C. RICHARDS is Chief Engineer, A. Leschen & Sons Rope Company, St. Louis, Mo.

two-legged sling is taken as equal to half the load divided by the sine of the angle at which the leg is inclined to the horizontal.

Chart 3 shows how tension in the rope increases as the angle with the horizontal decreases. For example, Diagram F demonstrates what high tension is produced when a sling is used at a flat angle.

Chart 2 (Sling Angle Calculation) may be used in determining the safe load capacity of a given sling or in calculating the proper rope to use for a given load.

The sloping lines correspond to the legs of the sling taken at intervals of five degrees. They may be used as shown by the diagram in the upper left-hand corner to determine the angles formed by the legs at the ring or link, and with a horizontal plane.

To illustrate this, a triangle is shown in heavy lines, one side of which is detailed as the leg of a sling. The legs form the 60-degree angle A at the top, and two 60-degree angles B at the bottom, between the legs and a horizontal plane.

The angle of spread (at ring or link) is shown in the vertical column A. The figures shown under B are the angles between the legs and a horizontal plane and are used in the calculations. Under C are the factors used in determining safe load capacities and under D factors used when calculating diameters of the rope required.

Examples:

1. What is the safe load that may be handled with a two-leg bridle sling made of $\frac{5}{8}$ inch diameter wire rope where the conditions require that the legs be spread at an angle of 70 degrees?

From Chart 2 it will be seen that if the angle of spread between legs is 70 degrees, the angle B each leg makes with the hori-

*Manufacturers provide tables of safe loads for various sizes and grades of their wire rope. The examples here are based on Hercules Red-Strand wire rope.

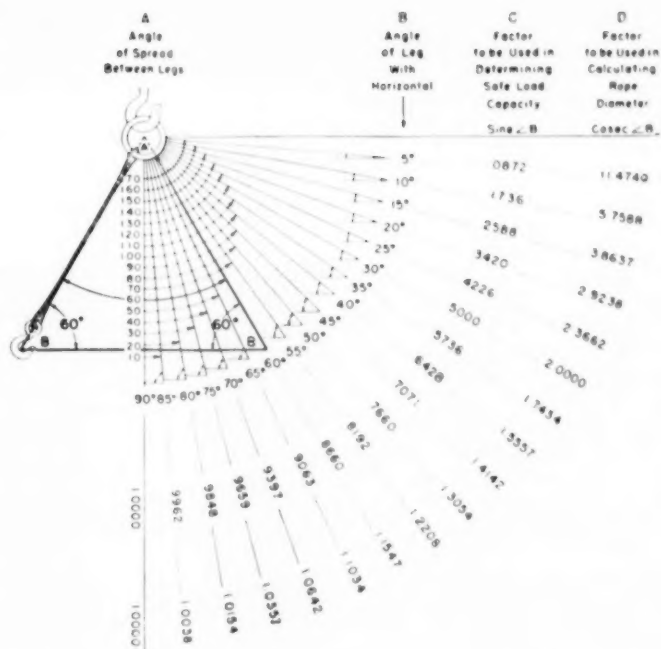


Chart II. This chart may be used in determining the safe load capacity of a given sling or in calculating the proper rope to use for a given load. The sloping line corresponds to the legs of the sling taken at intervals of 5 degrees.

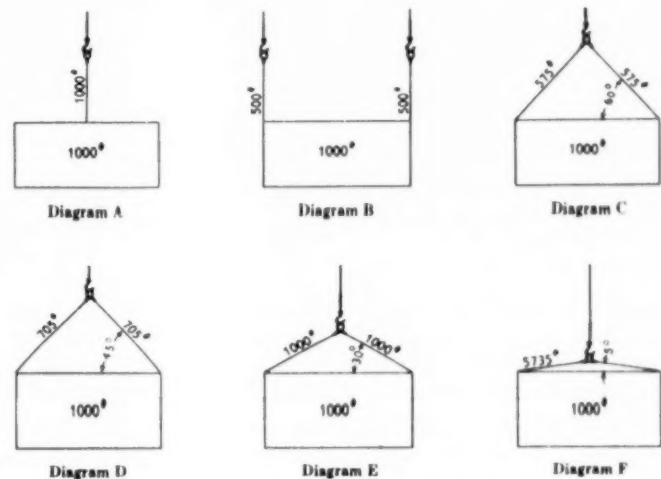


Chart III. How tension increases as angle with the horizontal plane increases. A 1,000-lb. tension on a vertical center lift is multiplied when sling is used at flatter angle.

zontal (when in balance) is 55 degrees. A stress of 2.3 tons could be safely applied to each leg, and 4.6 tons or 9,200 pounds total for the sling if used verti-

cally. To determine the safe load at the required angle the figure 9,200 is multiplied by the factor .3192 shown in column C opposite —To page 102

Looking for Trouble

The What, Why, How and When of inspections that spot hazards before they cause accidents

By HOMER G. JORDAN

LIFE IS AFFECTED from beginning to end by the results of inspection. The infant starts inspecting while still in his crib. He examines everything critically, from his toes to the nipple on his bottle. If you will allow me to put words into a baby's mouth prior to the usual age of articulation, he might say, "Is it good to eat?" or "Is there a drier spot in my crib?"

Because of continuous inspections resulting in increased satisfactions in life, he later arrives, over a rough trial-and-error road, to the troublesome age of puberty. Now he starts a new phase of inspection which he may never outgrow: "Is this feminine shape more pleasing than that feminine shape?" This is a difficult judgment to make, but he keeps trying. He will usually make a definite choice, which may be either temporary or permanent, depending on the findings through further inspections.

Now, let's view a sample day during his dotage. He is now critically surveying the skies before he ventures beyond his threshold in order to appraise the advisability of umbrella and rubbers.

Inspection is a normal, daily part of our lives, and it has become so for the very reason that it is necessary for our safety and satisfaction. The process of inspection is simply a critical examination of conditions which have in them either safety or casualty, depending on how well the conditions are examined and controlled.

HOMER G. JORDAN is Safety Engineer, Transmission Systems Development, Bell Telephone Laboratories, Murray Hill, N. J.



The author discusses a bulletin board display with a laboratory safety representative. He is showing a defective plug found on an inspection.

Inspections are made to get detailed information about equipment and attitudes which may have in them some hazard, even though obscure. The knowledge of conditions and attitudes as they exist should materially assist the busy administrator in appraising the magnitude of accident risk in his organization. This is a phase of administrative activity which is sometimes postponed because every other form of activity may also be considered urgent. However, safety of personnel is legally, as well as morally, a responsibility of supervision, and the accident is just as likely to happen today as tomorrow.

Many supervisory functions can be, and some must be delegated, for the supervisor to cover his

allotted activities. However, delegation of safety inspections is fraught with hazard. Second-hand information is never as accurate or as complete as first-hand information. Visual impressions gained through first-hand inspections remain vivid. Top generals find it to their advantage to make personal inspections to assure fitness of their soldiers and equipment for battle conditions. Equal vigilance in inspecting plant facilities and personnel attitudes might do much to reduce both frequency and severity of accidents.

We cannot be complacent when plant equipment is thought to be in good order and safe. The man is as much a part of an impending accident as the equipment. Inspection of attitudes and procedures of

men is as important as inspection of plant equipment, and somewhat more difficult to do. Statistical studies have shown, and safety workers well know, that certain individuals are repeaters; they have an individual proneness to injury. Why? Poorly organized methods and lackadaisical attitudes are obvious answers. Certain states are now actively studying this problem in relation to highway casualties. We should not wait for their complete answer.

Distracting Influences

We know there is much room for improvement here, and each and every agency looking for the answers helps to hasten the day when we more fully understand the human contribution to accidents. Machine operations are definitely phased by discreet operation of gears and cams. Human operations are phased by mental stimuli, but mental stimuli are not always discreet. This is especially true when repetitive tests are performed which sometimes permit the mind to wander onto disassociated subjects.

The least an inspector might do would be to attempt, at the scene of action, to determine the extent of distracting influences. Perhaps impulsive types of individuals should be kept in non-hazardous areas and away from active plant operations. Or, perhaps this type of individual can be re-trained for safer habits. Alert safety inspectors, even though not practicing psychologists, can make a contribution to the clarification of these problems.

Statistics of past accidents are of much help in forecasting accident rates. The National Safety Council predicts with uncanny accuracy the extent of each holiday toll on our highways. The more accidents, the better the accuracy. But here lies a difficulty. When industrial accident rates are reduced to small numbers by the use of statistics, further statistics become of less value because of their scarcity. This is about the position industry is in at the present time.

Industry is now safer than the home as a result of safety study and activity. Since the last vestige of accident occurrence does not respond to extrapolation of meager data, safety inspection of both plant and personnel seems an additional way to further lower the accident rate.

How should we inspect? It should be casual but thorough and include men and practices as well as plant equipment. Previously prepared check lists of items with hazard possibilities should be used in order to assure complete coverage. These items must be tailored to the particular plant and to special activities undertaken. These items must be revised when experience in the use of the check list points up any omissions. The general classifications are well documented in many treatises on industrial safety and include housekeeping, machine maintenance, machine guarding, building maintenance, lighting, protective equipment, crowding and others. Unfortunately, the recognition of the specific detailed items for any given work area depend on the vision and experience of the safety engineers or representatives and their supervision.

No Gestapo Methods

The inspection should not be conducted with pomp, which of course would breed suspicion of intent. No one likes the Gestapo, or responds to its methods. Particularly, the personnel interviews should be informalized, and any publicity should clearly emphasize that the inspection is a service to the worker and not an inquisition. Logical suggestions will usually be respected. Harping criticism usually defeats its purpose. A report of findings should be made, studied, circulated, and filed for future use. The report should state what is good as well as what is bad. Photographs may be made of exemplary conditions. The use of photographs to point up frightful examples is questionable. Of course, unsatisfactory conditions should be corrected promptly.

How often should inspections be made? Opinions differ considerably; however, agreement is general that a periodic inspection, invariable in its regularity, is indicated. Many industrial organizations are now following this rule. Most do not permit postponement to a more convenient time. In addition, lower echelons of supervision can reduce the work of scheduled inspectors. The continual spot inspection can well expose many hazards before they have a chance to strike. Special inspections should be made after any changes in operational set up.

Inspection Checklists

Lastly, and certainly very important, is the consideration of who should make the inspection. Any scheduled periodic inspection for the use of management in appraising accident likelihood should, of course, be attended by high level management. The man at his bench or machine cannot be expected to take any more interest in safety than is exhibited by his management. Here is one of the best places for management to throw its weight around. However, management personnel should be assisted by the safety engineer, and, in each area, by the safety representative for that area. The findings of this joint effort might be written in report form by the safety engineer. This report should be used by the safety representatives and by supervision for corrective purposes.

The foregoing may be summarized as follows:

What—Critical examination of plant equipment and personnel attitudes.

Why—To appraise risk of accidents.

How—Systematic check off against inspection check list.

When (How Often)—Scheduled periodic, supplemented by continual spot check.

Whom (By Whom)—Management plus safety delegates.

MECHANICAL

1. Housekeeping (Laboratory and Office):

a. Is there any unused equipment strewn about?

—To page 102



No Substitute For Cleanliness

A thorough wash-up removes the irritants responsible for many types of dermatitis

THE skin has been described as a shock organ; first line of defense against outside irritants. Its defense mechanism consists of a horny layer, beneath which there is a waxy, fatty layer. The unbroken horny layer is dissolved slowly by alkalis and sulfides. Alkalis also dissolve the fat needed to keep the skin pliable.

The protection afforded by the skin is reduced by its vulnerable portions. These are the ducts and hair follicles.

The need of adequate and proper cleansing of the skin to prevent dermatitis might seem too obvious to need discussion yet it is fre-

quently ignored by both management and workers.

Sufficient washing accommodations should be provided and, equally important, sufficient time should be allowed for workers to use them adequately. Employers should insist on thorough washing of the hands, forearms and face before the lunch period and at the end of the day. Where irritants are handled or disseminated as dust, convenient shower baths should be provided and employees instructed to use them after work.

Insufficient washing may keep a worker in contact with the irritant for 24 instead of eight hours a

day. On the other hand, too vigorous washing with harsh soaps, scrubbing brushes, pumice stone, too hot water, insufficient drying on wet and dirty towels predispose the individual to dermatitis.

Workers who use materials employed in their trade for skin cleaning may provoke skin ailments. Alcohol, turpentine, naphtha, carbon tetrachloride and alkaline wash powders are among the materials used. Sometimes dermatitis results from improper cleansing rather than from the occupational exposure.

An industrial cleanser should have the following qualifications:

1. It should be freely soluble in the water available in the plant for washing—hard or soft, hot or cold.
2. It should remove grease, oils and other soils without harming the skin.
3. It should not extract the natural oils and fats from the skin.
4. It should contain no harsh abrasives or irritant scrubbers.
5. In powdered form it should flow easily through dispensers.
6. It should not deteriorate or become insect-infested.

Silica, quartz, pumice, feldspar, rosin fillers and organic solvents are undesirable ingredients.

Free lathering does not in itself indicate a good cleanser but it is a property that most users expect of soap.

The cleanser should have a minimum of free alkali and have a pH of not more than 10 in a one per cent solution.

Most industrial cleansers now on the market consist of a superfatted neutral toilet soap containing a wetting agent or water softener and a soft scrubber which will not clog the plumbing. For most workers these are satisfactory. However, other cleansers should be provided for some workers. These persons are soap or alkali-sensitive. Many of them have chronic eczemas or dry fissured skins from the use of ordinary cleansers. Workers exposed to organic solvents, cutting oils and other petroleum oils also need cleansers of this type.

Cleansers for sensitive skins may consist of sulfonated vegetable oils; anionic synthetic detergents, such as the alkyl sulfonates, or high alcohol sulfo succinates, cationic detergents, such as quaternary ammonium compounds, or combinations of these.

Skin cleansers are available in three forms: Powdered or granular, liquid, and cake or bar.

Powdered soap is generally used for heavy-duty cleansing. Their scouring action may be increased by the addition of organic scrubbers. Where heavy soiling of hands occurs, powdered cleansers are generally more efficient and economical.

For light industries, such as food processing, meat packing, and for first aid rooms a liquid cleanser is satisfactory. It will provide adequate cleaning and sufficient emolliency.

For heavier operations it would require an excessive amount of liquid soap to emulsify and remove the grease, oil and related soils.

Convenient dispensers for both powdered and liquid cleansers avoid waste and aid housekeeping. They may be attached to washfountains or, if basins are used, they may be mounted on the walls.

Bar or cake soap is seldom used in the modern industrial washroom. When left in water it softens and much is wasted. On the floor a cake of wet soap can be a serious hazard.

Waterless skin cleansers are said to be non-irritating and effective

in removing nearly every type of soil except lacquer. An installation includes dispensers for the cleanser and paper towels mounted on a receptacle for used towels. These units are portable and are particularly useful for temporary requirements and where plumbing connections are not available. They may be located close to the workplace.

Much research has been conducted in the development of germicidal soaps. Among substances used have been phenol compounds and mercury bichloride; both powerful germ killers but not reliable in safe concentrations for skin cleansing. More effective, according to recent reports, is hexachlorophene which is produced by several manufacturers under their own trade names. Experiments have indicated its value in reducing secondary infections and in decreasing the incidence and severity of pyogenic skin infections, including carbuncles, furuncles, miliaria, impetigo, and seborrheic dermatitis. For food handlers it is effective in removing staphylococcus aureus, a frequent source of food contamination, from the hands of food handlers. Hexachlorophene may be added to both powdered and liquid soaps.

Protective Ointments

Barrier ointments offer the only means of protecting skin against irritants in some occupations. Often work must be performed with bare hands on jobs where gloves would slow down the worker or create a hazard. Also, these applications provide protection for the face where the exposure would not warrant a mask or helmet.

Protective applications may be in the form of ointments, emulsions, or solutions. Both water-soluble and water-insoluble types are available.

The skin should be washed thoroughly before the ointment is applied. It is also desirable to wash off the old coating and apply a fresh one several times a day. This renews the protective film and also removes the irritant.

Dispensers for powder or liquid soap may be attached to washfountains.





APPROACH SHOTS

(Fiction)

By **BILL ANDREWS**

Monday, August 3, 1953

I HIT THE GREEN with my five iron shot and the ball rolled ten feet past the hole. Morgan's chip just hung on the edge of the green. He putted almost carelessly, aiming quickly. The ball followed the curve of the slope perfectly, and I yanked out the flag to let the ball drop into the hole for a par.

My putt, made with all the care and judgment I could muster, hung on the lip of the cup and stayed out, and I owed Morgan another four bits.

The foursome ahead of us was taking its time, and we had a few minutes' wait on the 7th tee. Mor-

gan, who is safety man for Darr and Bradley Corp., grinned at me. "I'm three up on you now, boy. Revenge is sweet."

"Revenge for what?" I asked. "You beat me three out of four times we play."

"Revenge for beating me out in the sectional safety contest last year," he said.

"Tell you what," I cracked. "We'll call it square. I'll admit you're a better golfer, if you'll admit I'm a better safety man."

"The heck you are!" he snapped. "Don't tell me those second figures after the decimal point in a frequency rate are anything but luck."

"Any more luck than the difference between a long putt that happens to drop, and a short one that hangs?" I asked.

The foursome was out of our range then, and we teed off and halved a couple of holes and then knocked off. But we picked up the conversation in the locker room.

"I've been thinking," Morgan said. "Why do you edge me out, year after year? I'm a better engineer than you are. My guarding's better than yours. Our plant's more modern, most of it, than Jackson-Barnes's. Staff and budget are about equal. What's the answer?"

I told him I didn't have any pat answer to that question.

"Let's try to figure it out from our golf games," he went on, thinking out loud. "Golf tells a lot about a guy's personality."

"I don't get it," I said.

"Let's figure this out," he mused. "I can outdrive you and you can outapproach me. But I can outputt you." He thought a minute, then said, "What are the safety equivalents of driving, approaching, and putting?"

I said, "Putting's like the safety job at the actual point of danger. Machine guarding, lighting, things like that."

He broke in, "And driving's the big plans, the conniving to swing the front office behind a campaign with influence and money. And it's the analyses that let a guy plan his attack properly. It's the whole darned business of thinking out before you act. But what's the safety equivalent of an approach shot—the whole range of irons from five to nine?"

I was getting into the spirit of his argument from analogy. "Approach in safety work is just what the name says—the approach to your people. If you claim you're a better guarding man than I am, I say I'm a better hand at approaching people with safety ideas—foremen, workers, screwballs, lugs. My bulletin's a darned sight more readable than yours,

and I bet fewer of the guys sleep through my meetings."

He thought that one over. "Maybe," he agreed. "But approach is more than meetings and bulletins and posters."

I bought that, saying, "You bet it is. It's living with a plant force, knowing what gripes them and what tickles them. It's the whole business the personnel boys call human relations. How are your relations?"

"And how's your Aunt Suzy?" he quipped. "No, seriously, I get along all right with the men. They know my office door is always open, and they can come to me with ideas and problems anytime they want."

"Do they?" I asked.

"Not very often. And the ideas they do bring when they come aren't usually very good."

"They come to me," I bragged. "And like you say, the majority of ideas they come in with aren't any good. But I keep remembering that the majority of bright ideas I come up with don't prove out as sound when I analyze 'em."

Morgan grunted. "You sound like a personnel man arguing for a suggestion system. How many good ideas have employees really brought to you in the last five years? I don't mean foremen and safety committeemen—I mean guys who just drop in with a brainstorm."

I could answer that question right off the bat, counting on my fingers. "Just four," I replied. "One from a truck pusher. One from a janitor. One from a highly skilled machinist and one from an office gal."

Morgan looked triumphant. "Okay, you had four bright ideas come to you in five years. I had one, and another that was a little help, but not important. But a guy can't make a career of listening to every crackpot spout for a couple of ideas in five years."

"I can," I replied. "Look. Four ideas came to me that I wasn't bright enough to think up by myself. This is very rough and very approximate, but I'd say I spend

two hours a week listening to guys from the shop who think they know the answer to the safety problem. Say a hundred hours a year, say 350 hours over the five years, because it took me nearly two years to get 'em in the habit of coming to me. And, just as a guess, I'd say the employee ideas are stopping a lost time case a year each and maybe 10 first aid cases."

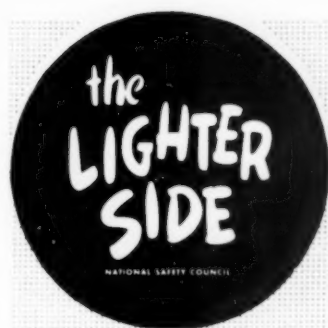
Morgan looked thoughtful, but still mindful to object. "Okay, you showed a little profit. Say a hundred hours of your time to stop one lost-time accident. But if you are half a good safety engineer, if you spent that hundred hours on planning, inspection, design, and promoting the program with the front office, you'd get a better return on your labor."

"I doubt it," I said. "For one thing, there's a law of diminishing returns on any activity, and the time I spend getting employee ideas isn't the first hundred hours I'd spend on any of those things, but the last hundred hours I'd spend on them if I had nothing else to do. And your analysis of profit on my time is haywire. I don't stop one accident by 100 hours of listening. I stop one a year. If my figuring is right, there were four accidents that didn't happen in 1952 because I listened, but I still only listened 100 hours. The pay-off goes on and on, until somebody comes up with a better idea for handling the same problem."

Morgan didn't reply directly, but shifted the discussion. "How do you deal with the guy whose idea is no good?"

"It depends on how bad it is. A plant super at Jones & Laughlin once told me he always accepted every employee suggestion unless there was a strong argument against it. I told you I got four good ideas. But I've acted on at least a dozen I figured would do neither harm nor good. I don't turn 'em down unless I have to."

Morgan snapped, "But, unless the ideas you hear are different from the kind I get, you must have



to turn down most of them."

I nodded. "I imagine mine are the same kind as yours. But there's another intermediate kind of

—To page 95

AMYL ACETATE

Banana Oil, Pear Oil or
iso-Amyl Acetate, sec-Amyl Acetate

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Properties

1. Amyl acetate, one of the aliphatic esters, is a colorless flammable liquid having a characteristic banana or pear-like odor, pleasant in low concentrations, but becoming progressively disagreeable as the concentration increases.

2. It is derived by reacting fusel oil (amyl alcohol) with acetic acid, using sulfuric acid. It is miscible with alcohol, benzene, carbon disulfide, chloroform and ether, and is slightly soluble in water. It is prepared commercially in several grades having various specifications.

3. Amyl acetate is available commercially in technical and commercial grades. The former is usually iso-amyl acetate, with admixtures of normal amyl acetate, n-propyl acetate, iso-butyl acetates, n-hexyl acetate and n-heptyl acetate.

4. Some physical properties of amyl acetate are listed in Table I.

Uses

5. Amyl acetate is used as a solvent for nitro-cellulose; in the manufacture and preparation of lacquers, enamels, photographic films, perfumes, fruit flavoring, metallic paints, waterproofing compounds, resins, waxes, celluloid products, rayon, and in the dyeing, printing and finishing of textile products. It is used by the leather industry in preparing buff and patent leathers and in the siz-

This Data Sheet is one of a series published by National Safety Council. It is a compilation of experience from many sources. It should not be assumed that it includes every acceptable procedure in its field. It must not be confused with American Standard Safety codes, federal laws; insurance requirements; state laws, rules and regulations, and municipal ordinances. Reprints of Data Sheets are available from the National Safety Council.

ing solution used to stiffen straw hats.

Hazards

6. Although the hazards of amyl acetate are primarily those of fire

and explosion, the effects on the health and well-being of personnel exposed are important and should not be overlooked.

7. The real danger to health in exposure to amyl acetate is the possibility that it may by its own odor disguise the presence of methyl alcohol, ether, benzene, toluene and the chlorinated hydrocarbons, any of which has a higher acute toxicity.

Toxicology

8. Amyl acetate may be taken into the system by inhalation, by absorption through the skin or by ingestion.

9. Its toxic status, as well as that of the other acetates, in general is still somewhat unsettled, but it is evident that the acetates

TABLE I

	iso-amyl acetate	Commercial amyl acetate
Molecular Weight	130.18
Specific Gravity	0.876 <i>at</i> 15/15°C	36 to 38 <i>at</i> 20°/20°C
Melting Point	-70.3°C (-91°F)
Boiling Point	142°C (287.6°F)	110 to 150°C (230 to 302°F)
Vapor Density	4.5 (Air=1)	
Vapor Pressure	0.2 in Hg <i>at</i> 77°C (Approx.)	5.9mm Hg <i>at</i> 25°C
Ignition Temp.	399°C (750.0°F)	379 to 400°C (715 to 750°F)
Flash Point	25°C (77°F)	17 to 49°C (63° to 120°F)
Flammable Limits	1.1% (no upper limit established)	



Fig. 1. Safety cans should be used to store and transport small quantities of any flammable solvent.

are considerably less injurious than other widely used solvents.

10. All the acetates are similar in most of their physiological characteristics. There are certain minor variations due to the differences in volatility and other physical properties.

11. Amyl acetate produces irritation of the mucous membranes

of the eyes and respiratory tract, accompanied often by a dryness and burning of the throat, with involuntary coughing even at low concentrations. Concentrations of the order of 900 ppm are dangerous for $\frac{1}{2}$ -1 hour exposure. They will cause respiratory difficulty and become intolerable. However, concentrations as high as 10 per cent have not induced death. Narcotic action causing a mild anesthesia has been noticed. Other effects are dizziness, headache, nausea, drowsiness, and oppression in the chest. There is no recorded case of chronic poisoning.

Shipping and Storage

12. Amyl acetate is shipped in 1-gallon cans, in 5- and 55-gallon non-returnable steel drums, in 30,000-pound drum cars, and in 6,000- and 8,000-gallon tank cars.

13. I.C.C. red label is required for those grades having flash points below 30 F. TAG open cup.

14. Large quantities of amyl acetate should be stored in outside,



Fig. 2. This man is properly equipped to enter a solvent storage tank: full face, hose mask and life line. Notice dike in background to contain contents of storage tank.

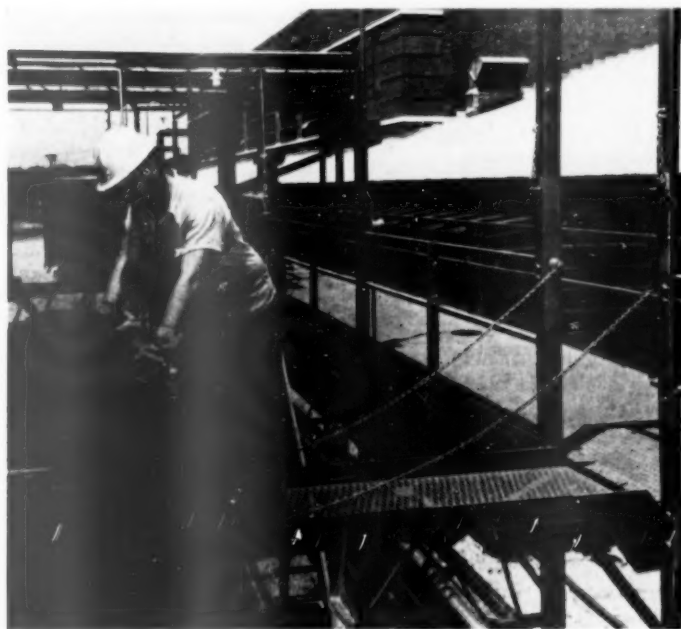


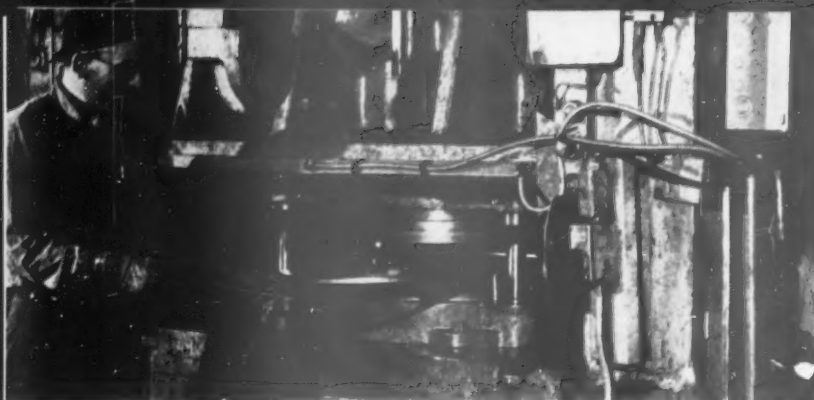
Fig. 3. A tank car unloading dock such as this makes emptying a solvent tank car a safe and easy operation.

above-ground storage tanks. Drums should be stored in a cool, well-ventilated area. All storage containers should be grounded.

15. Areas in which amyl acetate is handled should be considered hazardous. Ventilation, either natural or forced, should be provided so that concentration of vapor will not exceed 200 ppm. When mixtures of amyl acetate with other solvents are used the ventilating system should be adjusted to maintain the vapor concentration below the maximum allowable concentration of the most toxic component.

16. Electrical equipment should conform to the recommendations of the National Fire Protection Association. Smoking or open flame should not be permitted.

—To page 74



Radioactive Press Guards

By JAMES H. HEACOCK

A UNIVERSAL METHOD OF GUARDING power presses is one step closer, thanks to the efforts of two California electronics engineers.

One of these engineers was present when an employee's hand was amputated by a power press brake which had no guard. He was so shocked by the terrible accident that he began an investigation of the many press guards then available. He soon found, however, that no available guard could be applied either to that particular operation or to many other press brake operations performed in the shop.

So in collaboration with another engineer he designed a radioactive type guard for power press brakes which apparently was more universal than any other guard then developed. This guard proved effective not only on power press brakes but also on primary blanking, forming and piercing, as

JAMES H. HEACOCK is safety engineer, Division of Industrial Safety, State of California. This article appeared originally in *California Safety News*.

well as on secondary hand-in-die operations on punch presses. But even this type of guard is limited in secondary universal punch work where the hand must remain between the dies holding the part. (However, it can be applied to this operation, if proper nests are added or hand tools used.)

The operation of the guard is similar to the operation of a Geiger-Mueller counter used to locate radioactive ore. The press operator wears radioactive wristbands or rings. When his hands are in the protected area, the radioactive units are detected by the Geiger tubes located at the boundary of the danger area, and the press is not permitted to operate until the operator's hands are removed to a safe location.

The real value of this type of guard becomes immediately apparent when it is demonstrated that radioactivity can be detected even though the material being worked is between the radioactive source and the Geiger tubes.

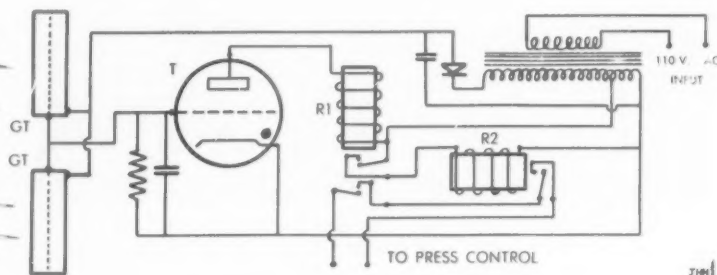
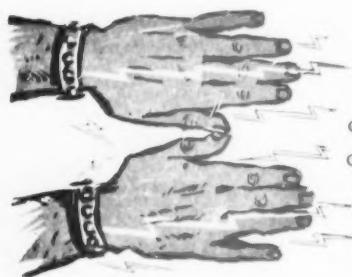
Power press protected by radioactive guards. See incomplete schematic below.

The all-metal Geiger tubes, which have a life unlimited by use, are shock mounted in a protective case which is attached to the press bolster or to the press ram. A lead shielding on the operator side of the case provides a sharp transition zone, and thus permits the operator's hands to remain close to the bolster plate during press operation.

A Geiger tube is similar to a metal radio tube. The type used consists of a thin aluminum shell containing gas. An electrode runs down the center of the tube, insulated from the shell. When a source of ionizing radiation is brought in proximity to the tube,

Presence of radio active sources (wristbands) near Geiger tubes (GT) causes tubes to conduct, which in turn causes Thyatron (T) (an electronic switch) to open. This opens control relay (R1). Control relay contacts are wired, either in clutch or brake circuit of friction clutch type press, or to treadle lock or overtravel device on fast-acting pin clutch type press.

To insure against operator removing protective wristbands, a time-delay-relay is incorporated in control unit. During regular operations, relay (R2) is energized each time Geiger tubes detect a radio-active source. However, time-delay-relay will open control circuit and make press inoperative whenever tubes do not detect wristbands at predetermined intervals, varying from 1 to 20 seconds. This also protects against failure of Geiger tubes as they do not "fail safe." Relays R1 and R2 and Thyatron are used in the normally closed or conducting position for "fail safe" operation.



the gas in the tube ionizes, causing the tube to conduct the high voltage potential at its terminals (in other words, closes a switch).

The danger zone can be adequately guarded by wiring the necessary number of tubes in parallel. The tube leads are brought out in a flexible conduit to the control unit, which may be mounted at any convenient location. There is practically no limit to the length of cable that may be employed, as the problem is to detect the presence or absence of radioactivity, not to count pulses as is done in a Geiger-Mueller counter.

The response of the guard is essentially linear. Even though radiation intensity is proportional to the inverse square of the distance between the source, wristbands, and the detector, Geiger tubes, the tubes, as used in the guard circuit, present a nearly logarithmic average current flow to radiation intensity response. In the range of distances and radioactivity used for the guard, the response can be assumed, for practical purposes, to be linear. Thus the radioactive wristbands need be only twice as strong for twice the distance response, instead of four times as strong.

The maximum range of operation is dependent on two factors—the strength of the radioactive source (limited by maximum acceptable exposures to radiation) and the maximum sensitivity of the detecting instrument, as determined by cosmic ray background. These two factors determine the range, quoted as between one and three feet. In addition, there is an independent variable which has to be considered, represented by the thickness and insulating quality of stock that might be placed between wristbands and detector.

Wrist Bands Not Dangerous

One of the first questions asked by press operators and their employers is: "Are the radioactive wristbands dangerous to the operator?" The answer is No, they are not. The radioactivity level is

Film Teaches Resuscitation



Instruction in two of the newer methods of artificial respiration is the theme of a ten-minute film recently produced for the U.S. Coast Guard.

These two methods, adopted by the Coast Guard, are the Holger Nielsen back-pressure or arm-lift method and the Emerson back-pressure or hip-lift method. Both methods have proven effective not only in revival of water-immersion victims but also victims of gas inhalation, electric shock, suffocation, strangulation, overdose of drugs, concussion and exposure to oxygen-deficient atmospheres.

The film illustrates the need for speed, rhythm, and endurance on the part of the person administering the breathing aid. It stresses the importance of uninterrupted application until the victim revives or is pronounced dead by a competent medical authority. The film also shows the accepted method of simultaneous application of oxygen, in conjunction with rhythmic pressure.

The film was produced for the Coast Guard Medical Division and is currently being shown at various Coast Guard installations around the world.

below that considered safe, which in turn, is well below the level of the maximum acceptable according to the General Industry Safety Orders. The only possible dangerous exposure would arise in the storage of the bands, possibly to an employee in the tool room where many bands were stored in one unprotected location. The possibility of such exposure can be eliminated by storing the wristbands at each guard control box when not in use, or by installing a properly shielded storage case in

the tool room.

The guard does not require adjustment for operator or die changes. One operator could set up a press for blanking, use both hands for holding the stock while making the run, change dies to a secondary hand-in-die operation, and complete the secondary operation. Thus by using this type guard he would be protected at all times, even while changing dies, without the necessity for any guard adjustment or removal for die changes.

Cases for Comment

Compiled by Robert D. Gidel, Senior Engineer,
Industrial Department, National Safety Council.

A company attempting to achieve the best safety record possible, in comparison with others in their industry, wants to be sure no accidents are wrongly charged. This can be accomplished by understanding and using ASA Standard Code Z16.1-1945.

If there is any doubt as to the interpretation of various sections of the code, the Committee of Judges of the American Standards Association Sectional Committee Z-16 is constantly available to review the facts of cases to determine their chargeability.

It is hoped that by enumerating some of these cases and by commenting on them briefly, it will be possible for the reader to anticipate possible similar occurrences in his own operations and take corrective action before such cases actually occur. It is impossible to analyze all factors involved since a complete set of facts is seldom available. However, the facts we have should provide food for thought on measures for preventing recurrences.

Doctor Didn't Understand Job

An operator in a chemical plant suffered an eye injury from a drop of lime slurry. He had finished making up a batch and proceeded to clean his equipment. He hit the edge of the tank with a hand scraper causing a drop of slurry to splash and enter his left eye. This resulted in a lime burn to the eye. There were no other areas burned or in any way affected.

His eye was washed with water and he was then taken to a physician who was a general practitioner. It was an established plant policy to have all injuries of this type, regardless of how slight they might appear, treated by a physician. The doctor washed out the eye, applied an ointment, and sent the man back to work.

After working little more than an hour, the injured man still reported pain in his eye. His supervisor therefore excused him for the rest of the shift and saw that the injured man was taken to his home. The injured was scheduled to work the following day.

The next morning a Safety Department employee took him to an eye specialist about 20 miles distant. The specialist treated the injured's eye and advised him to stay home from work. The same procedure was followed the next day.

On the following day, the injured was again taken to the eye specialist. The eye specialist had been advising the injured not to return to work because he (the doctor) did not know the nature of the work. The doctor did not realize a pad over the injured eye would not hinder the employee's ability to perform his regular duties. The specialist, upon learning of the nature of the work, advised the injured that he could return to work. Further, he stated that had he known the facts at the time of the first visit, he would not have advised the injured to absent himself from work.

The company asked whether or not this injury should be included in the rates. The Committee decided that this injury should not be included in the company's accident rates. Members decided this man stayed away from work due to a misunderstanding of the physician as to the nature of his work. Because the doctor had stated this man was able to do his regular work, in spite of the injury, it would appear the accident was in reality not sufficient to cause lost time.

Should eye protection have been required on this job? Was the man breaking rules in not wearing such equipment—or had the job been improperly analyzed in not requiring such protection in the first place?

This particular case indicates the importance of physicians being as familiar as possible with operations in the plant. Wherever possible, doctors should visit the

plant to look over various operations involved so they can properly determine when a man can return to work.

Wife's Treatment Not Satisfactory

An employee who was helping to fight a forest fire stepped in hot ashes. He received a burn on the left ankle.

The employee received treatment from the company doctor and continued to work without interruption for 3 days. The burn then became infected and the employee lost time from work. The company doctor stated that this employee had failed to report to his office for frequent treatments and when the employee did return it was evident his wounds had been improperly treated and bandaged by someone other than a doctor.

The injured employee stated his wife used to work in a hospital and had gone to a drug store and purchased some bandages and medicine recommended by the druggist. She had treated his wounds several times at home.

The company asked if it was necessary to include this case as a lost-time injury, since the employee had failed to follow doctor's orders.

The Committee decided this injury should be included in the company's industrial injury rates as a temporary total disability. Some of the judges remarked there was no question this employee received an industrial burn. There had been many other cases decided by the Committee where, either due to treatment or to lack of treatment, a case developed into an infection or other complications arose which resulted in lost time.

Why wasn't there some sort of followup system in effect in this case whereby the injured man's supervisor or another responsible person would have been notified when the employee failed to report back to the doctor for additional treatment?

This case indicates the necessity for having proper medical and first-aid facilities, but more important, it indicates need for a followup procedure to see that facilities are being effectively used.

THE SAFETY VALVE



This Changing World

THOSE OF US who came through World War I and managed to eat more or less regularly during the depression have sometimes been just a bit smug in our attitude toward the recent recruits to business. The kids have it soft—jobs at good pay begging for anybody who shows signs of human intelligence, Saturdays off, no need to exert yourself unduly to hold a job, little night work, and so on.

The last page of a recent issue of *Printer's Ink* was about a hassle on this subject, with the Old Man in the advertising agency shooting the above line at a junior account executive. But Junior didn't take it lying down.

He took the O. M.'s breath away by telling him he felt sorry for him. He was having such a tough time adjusting himself to what's going on. The O. M. was still living in a static, provincial, self-satisfied United States of only 90,000,000 people. That kind of experience, in a by-gone world, might be a handicap in investing a client's advertising dollars for maximum results in a zany, seam-busting, cock-eyed world. That's the only kind of world the cubs have known.

Perhaps Junior still has a few things to learn. But his remarks ought to keep some of us from the delusion that our gray hairs and bifocals necessarily indicate wisdom.

Take It Easy

DO YOU WORRY about feeling lazy in summer?

I did—until I received a recent bulletin from the American Mutual Liability Insurance Company. Don't let your conscience bother you, is the soothing advice. More leisurely activity, both at work and at play, means not only less physical discomfort, but makes you far less vulnerable to accidents.

Gardening and lawn work are among the most common activities leading to over-exertion. (How about washing windows?) Take the work in small doses when the sun is overhead and save the heavier jobs for cloudy days or cool evenings. (Better still, save them for rainy days when you can't work outside at all.)

There is also some good advice on recreation which means little to me. I haven't played 36 holes of golf in one day for years. In fact, my mismatched brassie and spoon and five mongrel irons haven't been out of the bag since last year's office picnic. Just keeping Crestfallen Manor from becoming a neighborhood blight needs all the time and energy I can spare from 425 North Michigan.

One thing the bulletin might have included was some warnings about climbing ladders for such jobs as painting and cleaning out gutters. And replacing screens with storm sash on second-story windows is just around the corner for many householders. Remember when you could get a man to do it for four bits an hour? People with compact little ranch houses are lucky.

A copy of this bulletin would be something to show the wife if she doesn't understand your attempts to keep her from prematurely becoming your widow.

In This Issue . . .

WHEN BILL JOHNSON of the NSC staff visited North American Aviation at Los Angeles to present the Council's Award of Honor, he was naturally impressed with the amazing developments in jet-propelled aircraft. He also admired the accident prevention program which won the award. Here are some of his impressions of the plant and the program. (Page 13)

* * *

Engineers—all varieties—are responsible for the economical and efficient use of natural resources and capital equipment in the best interests of their fellow human beings. This involves a responsibility to eliminate all possible booby traps. John Cost's advice to the engineering seniors at Rutgers University is recommended reading for safety men, whether they call themselves engineers or not. (Page 20)

* * *

Homer G. Jordan's whimsical approach to the subject of inspections leads to some practical suggestions for finding and correcting hazards in laboratory and plant. (Page 24)

* * *

This month's installment of *The Diary of a Safety Engineer* indicates that Bill Andrews has been finding some time for golf in the midst of his parish duties in Roundup, Mont. Since June 1, Bill has been lay missionary at Calvary Episcopal Church and studying for ordination. When Bill was NSC editorial director we were both in the high handicap class. (Page 23)

Carman Fish

How Good Is Our Performance?

By DAVID N. EDWARDS

Frequency and severity rates are still useful in measuring safety improvements, but we often need more sensitive measures

SAFETY is our business. We're interested in reducing accidents. Our interest stems from a desire to prevent human suffering. It's also important to us to keep production up, and production costs down. A good safety record will help to do this.

But how do accidents cut productivity? And how good is a good safety record? We know how to guard machines, when and where to install fire equipment. Injurious dusts, smokes, and fumes are familiar enemies. We know how to meet and defeat them.

We take stock of our situation by reviewing frequency and severity rates. But when we try to answer these questions we run aground.

Industry has become so complex that it is increasingly important that we find adequate answers and develop working theories to deal with these questions if competition is to be met. It is no longer sufficient to compare our performance to that of others, and be guided accordingly. For the past thirty years such gross comparisons have been made on frequency and severity rates. They have done yeoman service in bringing about major safety improvements. Their usefulness has not yet ceased, but more sensitive

measures are needed. Better understanding of why accidents happen is needed to improve preventive measures. A working concept of what takes place when accidents occur is needed to help us understand how to deal with the accident situation and readjust our production plans. Productivity is related to accidents, and we need to know what the relationship is.

Accidents Cut Productivity

We know accidents cut productivity. We've seen workers hurt and unable to operate their machines. We've seen machines break down and operators stand idle. When accidents happen, production may not stop altogether, but it suffers. What is the effect of accidents on productivity? Are there characteristic effects common to all accidents? How much production is lost? For how long? The answer to these questions will help us to deal with *accident periods*.

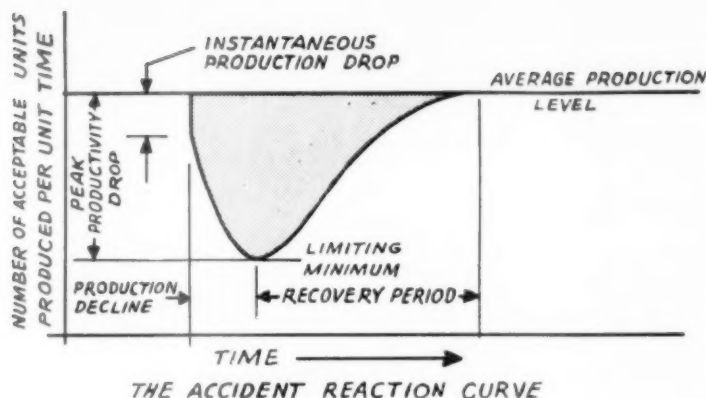
Eighteen girls are working in a drilling shop. Each girl works at her own drill press, and is not dependent on the work of the other girls. While not identical, all operations performed are similar. Small holes are being put in aircraft valve castings. Only a few seconds are required for each piece. Attempting to feed the drill too fast, one of the girls breaks the drill. A flying splinter of steel lodges in her eye! What happens to production? Think back to that last case in your plant. First, there is the immediate loss of the production of the injured girl. Her contribution to the over-all productivity of the group is cut off instantly. She's

startled, hurt, shocked and afraid! And she makes this known to the other girls. But all of the girls don't become aware of the situation at the same moment. Realization of what has happened takes time. They don't all respond in the same way. Some are greatly upset. Others pause only for a moment and get back to work much as if nothing had happened. But we lose more than just the production of the injured girl. Sometimes we lose many times the production of the one worker. How much depends on how the rest of the group reacts to the accident. And it depends, too, on how the foreman handles the situation.

Suppose we take a closer look at what happened to productivity. There was the immediate loss in production due to the injured girl. But, as the balance of the group realized what had happened, group productivity started to drop off. This continued loss increased until the full impact of the accident had registered. This took an appreciable amount of time. After this point had been reached the group began to settle down and production slowly recovered. Now we're in a position to make a stab at answering the question, "How do accidents cut productivity?"

What factors determine the shape of the curve, the peak productivity drop, the recovery period? There's the past accident frequency and severity experience of the group. But not all groups react the same under identical accident situations. The differences we find may be attributed to differences in group psychological susceptibility. Other factors also

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enter into the picture. There's the severity of the accident in question, and, of course, the type of production process.

Recovery isn't always to the same average productivity level in effect immediately prior to the accident. When accident records are bad, recovery may take place to lower and lower levels of productivity. If bad enough, production collapse may set in and productivity cease altogether.

Not only do accidents cut productivity in terms of gross units produced, but they tend to increase the number of defective pieces produced. Therefore, when thinking about how accidents cut productivity we must always think in terms of acceptable units produced.

How Good Are You?

So you've got a safety program! You inspect, recommend, install safety equipment, train your employees to do things the safe way, and watch. You watch over the plant like a mother hen over her brood. Look for the little things that might not seem to really matter. Listen for the creaks and groans to tip you off to accident trouble.

But how good is your safety performance? That is the payoff question!

Most of us have used frequency and severity rates to estimate our safety performance. For this purpose we've compared our current performance against past experi-

ence, or against that of comparable companies. This has given us a rough idea of how well we are doing. It has shown up the gross differences.

We want, and need, a closer measure of safety performance. With the recent application of statistical control charts to safety evaluation, a major step has been taken towards achieving this end. The principal advantages of the control chart are that it takes into account chance fluctuations in performance, enables us to get a "best" estimate of the true level of our safety performance, and

of our safety program. There are difficulties attached to this. To start, we must estimate the inherent level of accident incidence. To do this with any degree of accuracy may be impossible. If our safety performance is really good, our accident level will be approaching the zero mark.

Suppose we assume the inherent accident incidence level to be zero. We know that isn't strictly the case since the zero level represents better performance than we have any right to expect. This is a good thing, for it will prevent us from becoming too satisfied with our safety operations. On the other hand, when per cent effectiveness really starts to get up there, we'll be cautious about spending a lot of money on the chance that some small improvement in effectiveness can be achieved.

We should put our measure of effectiveness in units that will be significant for all persons concerned. For this purpose *acceptable units produced* will serve very well. To answer the question, "How good is our safety performance?", we'll use safety per cent effectiveness and define it:

$$\text{Safety per cent Effectiveness} = \frac{\text{Acceptable units produced under accident conditions}}{\text{Acceptable units produced under no-accident conditions}} \times 100$$

provides warning when things get out of hand. Unfortunately it does not answer the question, "How good is our safety performance?"

The ultimate goal of safety is the complete elimination of accidents. Most of us would agree that about the only way to do this is to stop operating. When men are working, there will be accidents! For any given operating situation there is a minimum level of accident incidence. Ask yourself, "How nearly are we approaching the inherent accident incident level for our operations?" Put in this way, we may estimate the per cent effectiveness

Talking about accidents in terms of production really brings home the high cost of poor industrial safety performance. An even more vivid picture may be given by considering the unit cost of production.

Where can these ideas be applied? Are they any more valuable than what we have been using?

The type of operation or activity wouldn't seem to make any difference in applying these ideas. However, no matter what type of operation, one particular characteristic must be evidenced. Production must be stable, except, of course,

—To page 34

Xylene and Toluene

(Xylol and Toluol)

Published by National Safety Council
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1. Toluene (methyl-benzene) and xylene (dimethyl-benzene), both homologs of benzene, are produced synthetically from petroleum or are recovered from the exhaust gases of coking ovens.

2. Toluene is a colorless fluid with an odor resembling that of benzene. Following is a list of some of the physical properties of toluene:

Molecular weight	92.13
Specific gravity	0.866 at (20/10)
Vapor density	3.14 (air equals 1)
Boiling point (760 mm. of mercury)	110.4 C (230.7 F)
Freezing point	-95° C (-139 F)
Vapor pressure	36.7 mm. of mercury at 30 C (1.44 in Hg at 86 F)
Flammable limits	1.4% - 6.7%



Figure 1. An airline respirator is used when solvent vapors become a problem. See paragraph 10.

This Data Sheet is one of a series published by National Safety Council. It is a compilation of experience from many sources. It should not be assumed that it includes every acceptable procedure in its field. It must not be confused with American Standard Safety codes, federal laws; insurance requirements; state laws, rules and regulations, and municipal ordinances. Reprints of Data Sheets are available from the National Safety Council.

Flash point	4.4 C (40 F)
Ignition temperature	552.2 C (1026 F)

3. Xylene (dimethyl-benzene) is a colorless fluid with an odor also resembling that of benzene. The composition of xylene is not uniform; it consists of a mixture of the three isomers, ortho-, meta-, and para-, in which meta-xylene predominates, 50-75 per cent. The following is a list of some of the physical properties of the xylene mixtures:

Molecular weight	106.16
Specific gravity (15.5° C)	0.85 to 0.87
Melting point	-50 to -56.8 C (-58.0 F to -70.24 F)
Flammable limits	1.0% - 6.0%
Ignition temperature	482 C (900° F)
Boiling range	129 to 150 C (264 to 302 F)
Flash point	27 C (63 F)

4. Both toluene and xylene are miscible in all proportions with such organic solvents as alcohol, ether, benzene and naptha. Both solvents are insoluble in water.

Uses

5. Toluene is used as a solvent and carrier in the manufacture of lacquers, as a diluent for colored inks, as the starting material in the synthesis of TNT. It has considerable use as a solvent for certain adhesives and cements and as a solvent in the cleaning and dyeing industry.

6. Xylene is used with toluene and benzene as a diluent for colored inks and alone as a degreasing agent, as a solvent for finishing preparations in the leather and silk industries, as a solvent for paints and varnishes, and as a specific solvent for certain adhesive compounds and synthetic rubbers.



Figure 2. This demand type respirator allows the wearer a great deal of freedom, and permits him to work in atmospheres whose concentration is greater than the two per cent maximum of the organic vapor canister mask.



Figure 3. Organic vapor canister mask with full face piece for use in solvent concentrations up to two per cent.

Fire

7. Both xylene and toluene are flammable and therefore should not be used in the vicinity of ignition sources. Electrical equipment should be of a type approved for explosive atmospheres Class I, Group D in accordance with article 500 of the National Electrical Code. Machinery which is subject to accumulations of static electricity should be fitted with static collectors and should be grounded.

8. Carbon dioxide, foam or dry chemical extinguishers are used to control fires involving xylene or toluene. Under some conditions fires in these materials can be brought under quick control by the use of water fog.



Figure 5. This aromatic hydrocarbon detector is calibrated for benzene, toluene and xylene.

Hazards

9. The main hazard from both toluene and xylene comes from the profound narcotic effect produced when they are taken into the system. Their acute toxicities are much higher than that of benzene but because of their lower vapor pressures they are seldom met in such high concentrations as is benzene. Their effects are less cumulative than those of benzene; consequently they do not appear to be as toxic as benzene.

10. Anyone exposed to either xylene or toluene in concentrations as low as 100 parts per million may display symptoms of a seriously upset central nervous system. The symptoms of mild poisoning will be headache, a mild degree of mental confusion and a marked reduction of muscular coordination.

11. As the seriousness of the intoxication increases so does muscular incoordination and mental confusion. Shortness of breath becomes an added symptom. Unconsciousness may follow as a result of exposure to extremely high concentrations of either xylene or toluene. When this happens, the solvent vapors paralyze the breathing centers of the brain. Death may result, but there are no cases on record of deaths attributable to either xylene alone or toluene alone.

12. Repeated exposures to the vapors of xylene and toluene will produce symptoms of a chronic poisoning, most of which are associated with a disturbance of the central nervous system: nervous irritability, insomnia, nausea, general fatigue.

13. Chronic xylene poisoning will produce in addition severe irritation of the eye and a flaky dermatitis, and there may be occasional nasal or bronchial irritations.

14. Chronic toluene poisoning will produce, in addition to the above symptoms, nosebleeds and heartaches and enlargement of the liver.



Figure 4. A face and eye shield like this is useful where solvent splashes are a problem.

15. Since xylene and toluene are homologs of benzene, it would be expected that one of the results of a continued exposure would be a depression of the blood manufacturing function of the marrow of the long bones. This point is still open to discussion, but it seems that this is not the case. However, continued exposure to toluene may produce a reduction in the red blood cell count and a slight increase in the white cell count.

16. Since toluene and xylene are frequently used with benzene, and since commercial grades of toluene and xylene may be contaminated with benzene, a monthly physical checkup and a differential blood count at least every three months

—To page 77



Figure 6. A flammable gas indicator of the benzene type may be calibrated for either xylene or toluene.

SMALL BUSINESSES and ASSOCIATIONS



By A. M. BALTZER

Director, Small Business and Associations Program, NSC

Small Plant Cuts Cost

Your reporter had heard about the excellent eye protection program in the Standard Automotive Parts and Equipment Company, Muskegon, Mich., and recently had the chance to take a trip through the plant to pick up some first hand information.

With about 150 employees on cast iron foundry and machine shop operations, their 100 per cent goggle program reduced eye injuries 62 per cent; reduced accident frequency rates 50 per cent and saved the company an estimated \$775 on eye injuries. Favorable experience under their retrospective insurance rating plan cut their premiums \$1,300.

Tom Girdler, plant engineer, is responsible for accident prevention and the successful eye protection program. The interesting part of the story is the desirable, though unexpected, effect of the eye protection program on all types of injuries. Here's more proof that a small company, with no elaborate safety program, can reduce injuries.

On The Spot Help

Small and medium sized companies, with up to 250 employees, are now able to get on-the-spot safety training service from a Chicago firm of employee relations consultants. The Council staff has advised this firm and is furnishing some of the text material used in the six one-hour safety courses for supervisors.

The important and unusual fea-

ture of this service is its "on the spot" convenience. The discussions can be tailored to the company's local and industry needs thereby multiplying the effectiveness of the short course.

Anyone having knowledge of other similar arrangements is invited to list them with the Small Business Program, National Safety Council.

Supervisors' Safety Award

A novel yet simple idea for developing supervisory interest is reported by the National Mineral Wool Association. The Association invites its members to name supervisors whose departments complete two accident-free years. At regional safety meetings of the Association for supervisors, the winners are presented a Certificate of Merit shown below. Of course, photographs and news releases give highly desirable local and company-wide publicity.

The success of the award stems from its simplicity—no complicated rules on frequency, severity or degree of hazard. The Association's safety committee feels that general acceptance of the award plan is more important than an



overly elaborate but "fair" set of rules. The point is: the plan works; it gets excellent publicity and it has helped reduce the industry's injury rate.

Congress Program? Sure!

The Small Business and Associations Committee agreed that there should be another meeting to help association executives and association safety committeemen. This session, for and by associations able to help small companies will be held the morning of October 20 at the Morrison Hotel. Here are the high spots.

John W. Gibson, safety consultant for the Institute of Industrial Launderers will discuss "The Indirect Values of Accident Prevention." This might be called the sequel to the much-discussed subject of indirect accident costs.

John H. Scton, secretary of the Pennsylvania Manufacturers Association, will speak on "We Help Small Business on Its Home Grounds."

Following the morning session, associations qualifying for our new Safety Award will be presented certificates by W. Dean Keefer and by Ned H. Dearborn. Again, special invitations will go out to associations interested in safety, those who should be interested and to sectional officers.

FPBA Urges Local Activities

The Folding Paper Box Association in its *Safety Bulletin* urges its members to attend the many local safety conferences around the country. It suggests that each company appoint a representative to attend safety sessions, to view the safety exhibits and to report items of interest.

This sounds like a good idea because it is something specific which will stir up interest within the individual companies as well as in the Association's program. If more associations did this the local conferences would double their attendance within a few years time.

No more drudgery for me in cleaning grease-caked floors



His boss is happy too . . .

A flip of the switch
re-sharpens brushes
automatically!

and should be. Now an Industrial Dry-Scrubber, Finnell's 84XR at left, does the job in about one-tenth the man-hour time required to hand-scrape the floors! And of course the machine is far more thorough, and spares maintenance men the back-breaking effort of manual methods. Equipped with two powerful scarifying brushes, the 84XR digs through and quickly loosens even the most stubborn coatings of dirt, oil, grease, and shavings. Universal couplings enable the brushes to clean recessed areas that rigid coupling brushes would pass over and miss.

Reversible motor keeps wires sharp. A flip of the switch reverses the rotation of the brushes and re-sharpens them automatically . . . while working! Eliminates the need for frequent changing of brushes by hand in order to maintain a sharp cutting edge. Reversal of brush rotation also helps keep the brushes functioning efficiently by ejecting sticky substances that would otherwise clog and slow up the cleaning process. Total brush spread of the 84XR is 22 inches. Low, compact design permits cleaning right up to and beneath machinery — areas where deposits are heaviest. Interchangeable rings and brushes adapt the machine to wet-scrubbing, polishing, and steel-wooling.

Clean floors allow industrial trucks to move swiftly, surely and, according to actual tests, with half the pull it takes to move loads over dirty floors. In addition, clean floors aid safety underfoot and contribute to worker productivity. So it pays to keep floors clean — especially with a labor-saving 84XR! (The Vacuum Cleaner at extreme left, Finnell's 10B for wet and dry pick-up, features a By-Pass Motor.)

For demonstration, consultation, or literature, phone or write nearest Finnell Branch or Finnell System, Inc., 220 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

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to floor
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Forty-foot diesel-powered warping tug (center) with pushing blade sluices logs through. Buoyancy raft on after deck and life preservers are conveniently located.

Safety Measures on Logging Craft

Duties of a logging vessel are many and varied, and designs and types of logging craft are equally numerous. There are vessels for sweeping, boom tending work, general work, sluicing, towing by winch, and straight towing of logs or barges of pulpwood.

Logging craft are basically custom-built, taking into consideration the amount of wood to be moved, depth and area of operating waters, location, etc. Standard models range from 17-foot sluicers to 85-foot straight towing tugs.

All logging boat safety equipment in Canada is regulated by requirements of the Canada Steamship Act, and issued and enforced by the Federal Department of Transport through the Board of Steamship Inspection.

The Act, in many ways similar to Coast Guard regulations in the United States, controls all phases of Canadian Maritime operation. It is concerned with vessel construction in ships more than 60

feet long or over 15 gross measured tons, and with crew safety on all boats and ships at sea.

The Canadian Insurance Under-

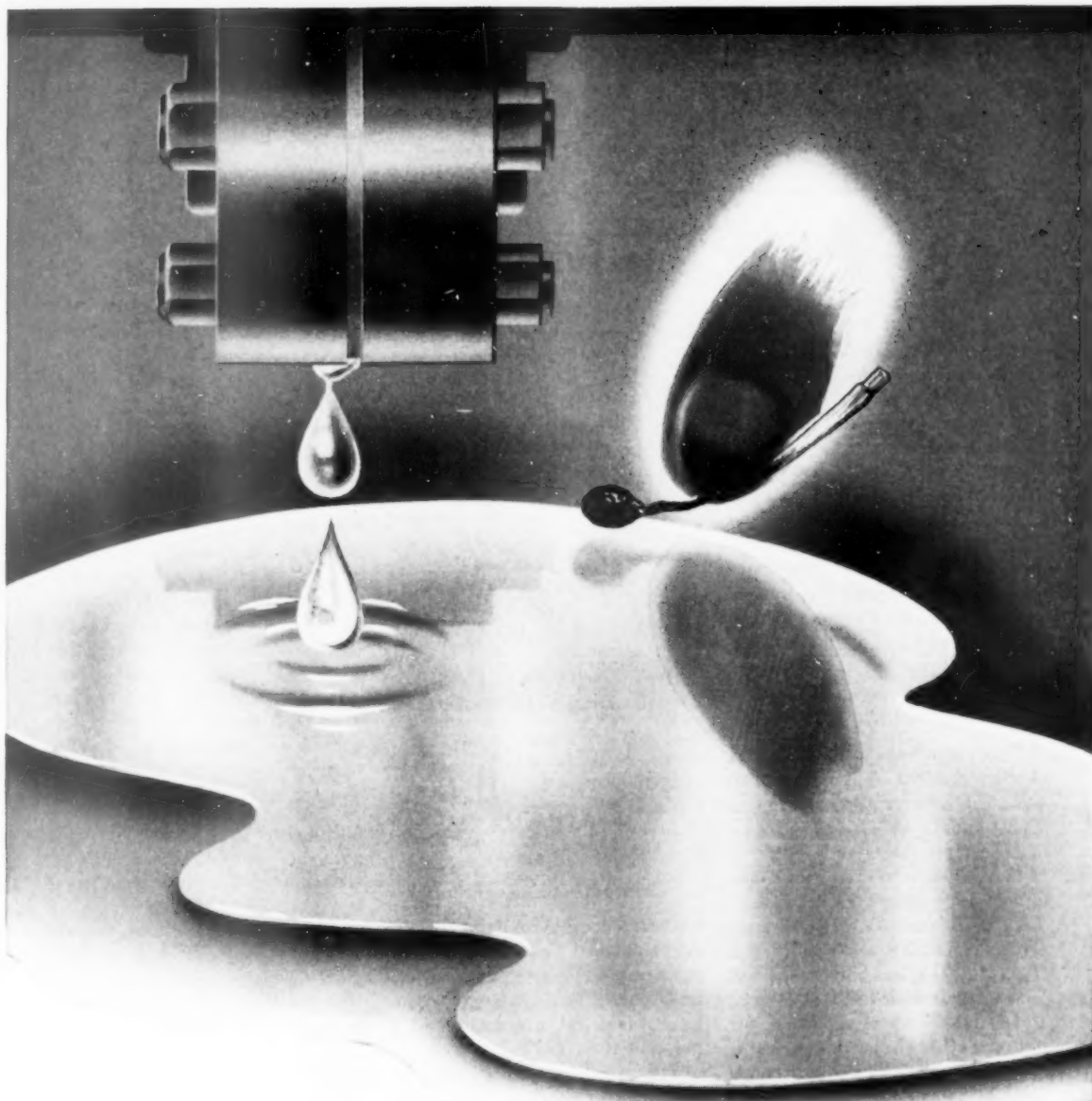
writers also recommend additional safety measures. All regulations depend on the size of the vessel, its duties and the intended location of the operation.

A powered logging vessel is generally unlike an ordinary craft. It must be exceedingly strong to

To page 46



Eighty-five foot logging tug has powerful winching machinery handling up to 10,000-cord rafts. It carries lifeboat, ring buoys, axe, and rafting lights.

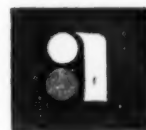


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THE ACCIDENT BAROMETER

Prepared by the Statistical Division, National Safety Council

ACCIDENTAL DEATHS in April numbered approximately 7,300, the same as in April, a year ago. The increase in motor-vehicle fatalities was offset by decreases in deaths from home and public non-motor-vehicle accidents. Deaths from occupational accidents were about as numerous as last year.

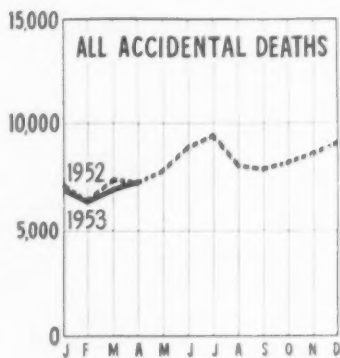
The four-month death total was 27,400, a reduction of 3 per cent from 28,300 in 1952. Most of the decrease occurred in fatal home accidents, but deaths from public non-motor-vehicle and occupational accidents also were less numerous than last year. Motor-vehicle deaths showed a moderate increase over 1952.

Motor-Vehicle Deaths

The motor-vehicle death toll in April was 2,890, an increase of 10 per cent over April a year ago. Compared to 1951, it was an increase of 11 per cent.

The death toll for the four months was 11,140, an increase of 5 per cent over 10,590 last year. The four-month death rate per 100,000,000 vehicle miles was 6.6, no change from 1952.

Of the 45 states reporting for four months, 15 had fewer deaths than last year, 2 showed no change and 28 had more deaths. Reporting cities with populations over 10,000 showed no change from April last year, but an increase of 7 per cent for the four months.



	1953	1952	Change
April	7,300	7,300	0
Four Months	27,400	28,300	-3%

Regional changes from 1952 in the four-month death totals were:

North Atlantic	+8%
South Atlantic	+2%
North Central	+6%
South Central	-3%
Mountain	+9%
Pacific	+9%

Occupational Accidents

Deaths from occupational accidents totalled 1,200, about the same number as occurred in April last year. The four-month death total was 4,400, a reduction of 2 per cent from 1952.

The April frequency rate for plants in seventeen sectional accident prevention contests conducted by the National Safety Council was 6.01, a reduction of 3 per cent from last year. The April rate for

plants in community council contests was 7.68, a decrease of 14 per cent. In sectional contests, the four-month rate was 6.06, a reduction of 7 per cent; in community council contests, it was 7.13, a decrease of 15 per cent.

Public Deaths

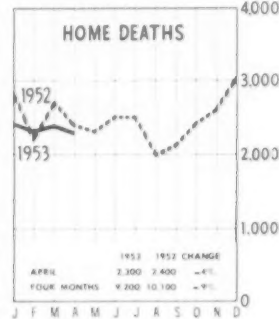
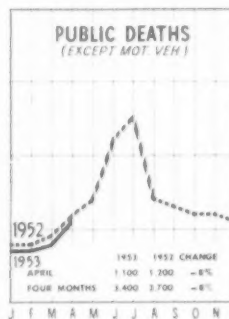
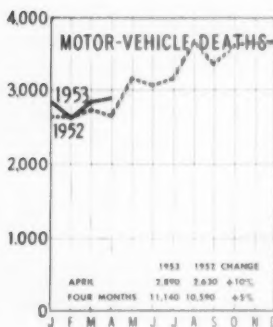
There were approximately 1,100 deaths from public non-motor-vehicle accidents in April, a decrease of 8 per cent from April last year.

The four-month total was 3,400, or 300 fewer than occurred during the same period in 1952. There was a sizable reduction in deaths from firearms accidents; moderate decreases in deaths from burns and transportation accidents; and small reductions in fatal falls and drownings. A small increase occurred in deaths of young people 15 to 24 years old. Other age groups showed decreases from last year with the largest change recorded for persons 25 to 44 years of age.

Home Deaths

Home accident fatalities in April numbered approximately 2,300, a reduction of 4 per cent from April last year.

The total for the four months was 9,200, or 9 per cent less than the 1952 comparable total of 10,100. Most of the decrease occurred in deaths from mechanical suffocation and poisonings, but deaths from burns, firearms accidents and falls also were less numerous. All age groups showed some reduction from last year with the largest change recorded for persons 15 to 24 years of age.





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BELL TELEPHONE SYSTEM Local to serve the community. NATIONWIDE to serve the nation.



Logging Craft

(From page 42)

withstand constant poundings by logs. The winching and main power machinery is usually heavy-duty, rugged and weighty. This type of vessel is considerably heavier for its size than conventional vessels and special consideration must be given to buoyancy and stability when on winching operations. The winch pull on a boom of logs can easily be 25 or 30 tons in open waters. The vessel in these conditions is usually unable to maintain speed and direction for maximum safety. Extra stability must be considered in the designing stage.

Certain material used on some logging tugs is inspected and approved by the Steamship Board before installation. In large tugs, vital items are checked during actual construction. Engineers see that special fittings, such as hand rails, are designed for safety. Decks are kept flush and free from obstruction, and are often lined with a special composition against possible slippage. These

specifications all assist in providing a safe ship. Welding on all logging craft is done by qualified and experienced welders.

Main engines are dynamometer tested and inspected before installation whenever necessary. Guards cover all open gears, moving parts, clutches and pulley drive belts, etc. A mechanical or hand-operated bilge pump is always fitted.

Most logging craft are fitted with running and rafting lights, and if prolonged night operation is intended, a powerful searchlight will be added. Regulations require a fog bell or warning horn. Navigation equipment will depend on the intended location and vessel size. Large tugs, operating in open waters, will have radio telephone and radio navigational aids.

Depending on numbers and service, a life-boat, life-raft, ring buoys, and/or life preservers are installed for crew members. Everyone must be provided for. Exact equipment is specified by the Canada Act. When a life-boat is

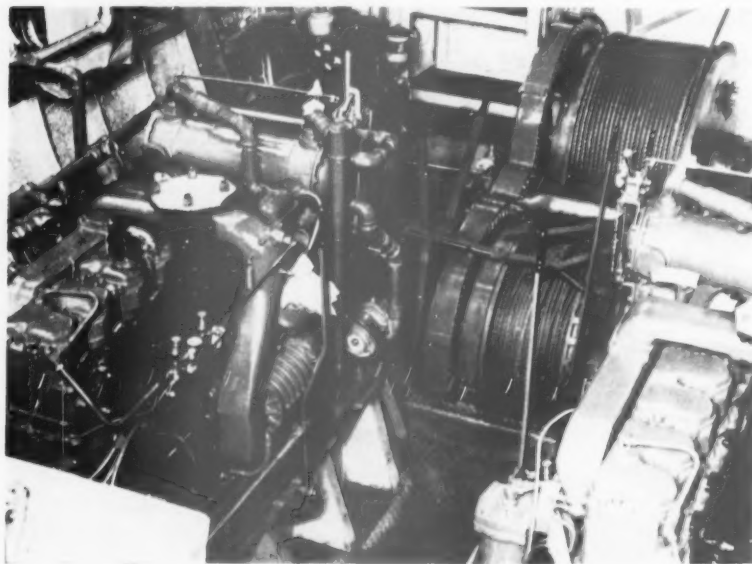
Much equipment must be installed in the limited space of the engine room of a 60-foot twin-screw straight towing tug. Dual winch drum is powered from front end of one diesel. Forward winch is anchor winch, and after winch a towing winch,

carried, it must be equipped with such safety items as a compass, oars, flares, etc.

Fire, an ever present danger, is preceded by an explosion in the majority of cases. On large tugs, a mechanical fire pump is usually installed in addition to a built-in CO₂ system in the engine room. Mechanical pumps have numerous outlets and sufficient hose to cover any part of the vessel. Various types of fire extinguishers, foamite, soda acid and tetrachloride are installed at convenient stations with fire axes, fire pails, and sand pails. This equipment is somewhat reduced on smaller vessels, but some equipment is always provided to extinguish fire. On closed cabin-type vessels bilges are vented and batteries covered. When necessary bilges are vented with electric blowers. The carburetor is usually fitted with automatic drip collector. Increased use of diesel power has reduced fire hazards.

The company's engineers work closely with the Steamship Board at all times. Measures are often taken above regulation requirements to safeguard crew and equipment.

This article is based on material furnished by Russel-Hipwell Engines, Limited, of Owen Sound, Ontario, manufacturers of welded steel logging craft.



Campaign Against Abandoned Ice Boxes

In an effort to eliminate the needless deaths of children by suffocation trapped in abandoned ice boxes and refrigerators, members of the Refrigeration Service Engineers Society are being requested to distribute posters in places where the public may be reminded of the danger of these "death traps" unless hardware and doors are removed.

The posters, 13 x 17 inches in size, are grim reminders of reported tragedies and the possibility of additional fatalities in the future unless some thoughtful person takes the necessary steps to make the abandoned refrigerator harmless.

Meet a high-priced executive

His take-home pay isn't so much. But he costs his firm more than a couple of vice-presidents.

He squanders dollars—using inferior floor polishes, stripping, waxing and stripping again in an endless and costly cycle. He exposes his company to heavy claims for damages—the result of accidents on slippery floors.



Mr. Maintenance Manager, if this man works for you, it's time you put him wise to the LEGGE System of Safety Floor Maintenance. LEGGE gives you floors that gleam *without slipperiness*. Your polished surfaces hold up even under the roughest abuse, because LEGGE Safety Polishes can't be "walked off". Many buildings report up to 98% reduction in slip-accidents, 25% savings on materials, 50% savings in labor. One well-known institution cut its maintenance budget from \$60,000 to \$40,000 by adopting the LEGGE System.

Note: There is no single cure-all product suitable for *all* floors. The polish that performs wonders on linoleum may prove damaging to asphalt tile. The cleaner that makes a new floor sparkle may not be up to removing the ground-in dirt and old wax of a 20-year-old floor.



That's why we custom-tailor LEGGE Safety products to specific needs. For important facts about *your* floors, write, telling us their composition, area and age. WALTER G. LEGGE COMPANY, Inc., 101 Park Ave., New York 17, N. Y. Branch Offices in principal cities. In Toronto—J. W. Turner Co.

Walter G. Legge Company, Inc. N-8
101 Park Ave., New York 17, N. Y.

Gentlemen:

☐ I'd like to know what Legge Safety Products can do for my floors. I have approximately _____ sq. ft. of

(composition)

☐ Send me your FREE booklet, "Mr. Higby Learned about Floor Safety"

Name _____

Firm _____

Street _____

City _____ Zone _____ State _____

GREEN CROSS NEWS



Activities of Local Safety Councils and Chapters

Compiled by TOM A. BURKE

Director of Local Safety Program, Field Organization, NSC

Reaching 400,000 Workers

The 1953 Industrial Safety Award Contest conducted by the Greater Los Angeles Chapter, NSC, is now the largest local industrial safety competition in the country, with 250 companies and 400,000 employees competing. Baxter F. Ball, vice president of industrial safety for the Chapter, announced current competition has broken both local and national records for contests of this type.

Entrants have included banks, as well as manufacturers of radio and TV sets, aircraft parts and rubber goods, in addition to the usual groups participating in an interplant contest. In addition to division awards, contestants are also competing for the "Perpetual Sweepstakes Trophy," awarded annually to the company with the best all-around safety program. General Metals Corp. won the award last year.

During the first three months of 1953 accidents dropped 15 per cent among competing companies, in spite of a 15 per cent increase in number of man-hours worked.

Chapter Meets Every Week

For more than six years, the San Joaquin County Safety Council has held weekly meetings of members each Wednesday morning. The sessions follow a breakfast served promptly at 7 a.m. In spite of the early hour and frequency of meetings, there is an attendance of from 20 to 40 members.

At the meeting on Wednesday, July 1, attendance included the mayor, city manager, chief of

police, city traffic engineer, a municipal judge, managing editor of the leading newspaper, manager of a Stockton radio station, with some 30 other leaders of the city and county.

One businessman attended from a small town 20 miles away. The weekly meetings give every member an opportunity to air his grievances or make constructive suggestions and the frequency of the meetings provides opportunity for quick action by the council when such action is in order.

According to Mrs. Lovilla Lalor, executive secretary of the council, members prefer the seven o'clock hour because it allows two hours for food and discussions.

Special Industrial Edition

The *New Orleans Item* recently featured a special edition on industrial safety. One of the lead articles told the story of the Texas City disaster. Another was by Wade O. Martin, Jr., insurance commissioner of Louisiana, in which he pointed out safety programming and engineering in industrial plants "pay off." Guest editor for this edition of the *Item* was Arthur J. Naquin, director of the Industrial Section, Metropolitan New Orleans Safety Council.

"Safety 'Round the Clock"

Prior to conducting a city-wide campaign for funds in the Pasadena area, the Pasadena District Chapter, National Safety Council, prepared a convincing mailing piece titled *Safety 'Round the Clock*, pointing out the seriousness of the off-the-job accident problem and emphasizing how the

Chapter's activities are designed to meet that situation as well as problems in the plants.

The council seeks a budget of \$27,000 for 1953-54. Its present activities include traffic, fleet, industrial, home, child and school, public information and fire prevention. Deputy Chief T. William Heidner of the Fire Department is president of the safety council.

The mailing piece was prepared by Frank Jones, former manager of the Pasadena Chapter who recently became public relations director for Consolidated Engineering Corp.

L. Clifford Kenworthy, manager of Crown City Dairy, Valley Maid Company, a prominent business leader in Pasadena, is chairman of the special finance committee that will raise the budget.

Pedestrian Safety in Chicago

More than half a million pedestrian leaflets are being distributed by the Citizens Traffic Safety Board, Chicago. It is planned to publish four such leaflets.

In addition to other methods of distribution, they are handed out by cashiers in chain stores.

More than thirty Kiwanis and Lions clubs and other service clubs joined in a city-wide safety message stenciling program, which began June 13. The warning "Look Both Ways" was stenciled on curbs throughout the city.

Changes in New Haven

Lincoln H. Lippincott, manager of the New Haven Safety Council, (Conn.) resigned recently.

Mr. Julien H. Harvey, former manager of the Accident Preven-

—To page 90



Handclasp of a friend-in-need

There's confidence in the very "feel" of the world famous C-O-TWO Squeeze-Grip Carbon Dioxide Type Fire Extinguishers. The quick-acting "Squeeze-Grip" fits your hand naturally like a handclasp...hangs right...carries right...works right. You're in complete command of the situation instantly...no fumbling...no fatigue.

From the non-conducting, shatterproof discharge horn to the high strength, durably finished cylinder, you get top quality construction that results in a lifetime of satisfactory service. Because of the very few working parts and corrosion resistant materials throughout, the total cost to you over the years is less than other initially lower priced makes...fire after fire, recharge after recharge, without trouble.

It's not hard to see, when you fully compare and try, why C-O-TWO Squeeze-Grip Carbon Dioxide Type Fire Extinguishers

are your best buy for killing flammable liquid and electrical fires, as well as some surface fires involving ordinary combustible materials. Sizes range all the way from 2½ to 100 pounds capacity...all fully approved by the Underwriters' Laboratories, Inc., Factory Mutual Laboratories, Armed Forces and Government Bureaus.

With C-O-TWO Squeeze-Grip Carbon Dioxide Type Fire Extinguishers the penetrating carbon dioxide is a clean, dry, non-damaging, non-conducting, inert gas...smothers fire instantly, leaves no after fire mess...harmless to equipment, materials and finishes...even food is still perfectly edible.

Act now for complete free information on these first-rate, sure-acting fire extinguishers. Remember fire doesn't wait...get the facts today!



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Squeeze-Grip Carbon Dioxide Type Fire Extinguishers
Dry Chemical Type Fire Extinguishers
Built-In High Pressure and Low Pressure Carbon Dioxide Type Fire Extinguishing Systems
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Safety's Big Week

41st National Safety Congress and Exposition
October 19-23, 1953

CHICAGO will once more be the scene of the world's largest safety gathering when the 41st National Safety Congress and Exposition convenes here, from October 19-23. The line-up of speakers and subjects for this, expected to be the biggest conference yet, is rapidly nearing completion. Copies of the preliminary edition of the Congress Program will be mailed to members during the latter part of August.

* * *

Morning sessions, conducted by the American Society of Safety Engineers, will feature topics of general interest to safety personnel of all industries. Subjects will run the gamut from Nuclear Energy as a Potential Industrial Problem to Wood Ladders and Scaffold Planks.

Psychology, now recognized as an important factor in shaping safety-conscious thinking on the part of workers, will be given an extensive program. Dr. Raymond H. Fletcher, of Rohrer-Hibler-Replogle, Dallas, will speak on the Use of Psychology Aids in Selection and Replacement of Employees. Psychological Factors in In-

dustrial Accident Prevention will be expounded by Dr. D. J. Moffia, Department of Psychology, North Carolina State College.

* * *

The role and importance of the safety engineer will also receive attention. T. R. Leadbeater, safety director of Todd Shipyards, New York City, will address the morning sessions on The Safety Engineer's Place In Management Organization. The safety engineer's liaison role, between workers and management, will be discussed by Samuel M. MacCutcheon, safety director of Dow Chemical Company, Midland, Mich. His subject will be: The Safety Engineer Informs His Management.

Industrial safety training is slated for attention during these morning sessions. Training For Today's Safe Living will be the subject of a talk by Dr. Walter A. Cutter, assistant director of New York University's Center for Safety Education.

William Borrie, Kaiser Aluminum & Chemical, Chalmette, La., will further emphasize the importance of safety training with Training For Safety Through Action.

Dr. Paul J. Mundie, of the psychological consultant firm of Humber, Mundie and McClary, is slated to address the morning sessions, Tuesday through Friday.

* * *

Seven hotels will provide the meeting rooms for sessions: Conrad Hilton, Congress, Morrison, Hamilton, LaSalle, Blackstone and Palmer House. Registration and information desks will be located in these hotels. Following are the assignments for the various general and sectional meetings:

Conrad Hilton—Annual Meeting, Banquet, Early Morning Ses-

sions, Air Transport, Chemical, Coal Mining, Electrical Equipment, Industrial Nursing, Metals, Mining, Petroleum, Printing and Publishing, Public Employee, Public Utilities, Pulp and Paper, Rubber, Wood Products, Home, ASSE Annual Meeting and ASSE Subject Sessions.

Congress—Automotive and Machine Shop, Glass and Ceramics, Meat Packing, Tanning and Leather; Power Press, Textile, Traffic, Wood Products and ASSE Subject Sessions.

Morrison—Food, Marine, Railroad, School and College Divisional Sessions.

Hamilton—Aeronautical, Cement and Quarry, Construction, Fertilizer and Public Utilities.

LaSalle—Commercial Vehicle and Transit.

Blackstone—Women's Activities, Palmer House—Farm.

* * *

Mrs. Ivy Baker Priest, Treasurer of the United States, and for many years an officer of the Utah Safety Council, will address the Annual Meeting, Monday morning, October 19. Martin P. Durkin, Secretary of Labor, will be the keynote speaker at the Federal Safety Council meeting, Monday afternoon, October 19.

* * *

The 1953 Exposition will feature the largest and most detailed display of accident prevention equipment ever to be shown anywhere. Every available foot of exhibit space in the Hilton Hotel will display products, equipment and services.

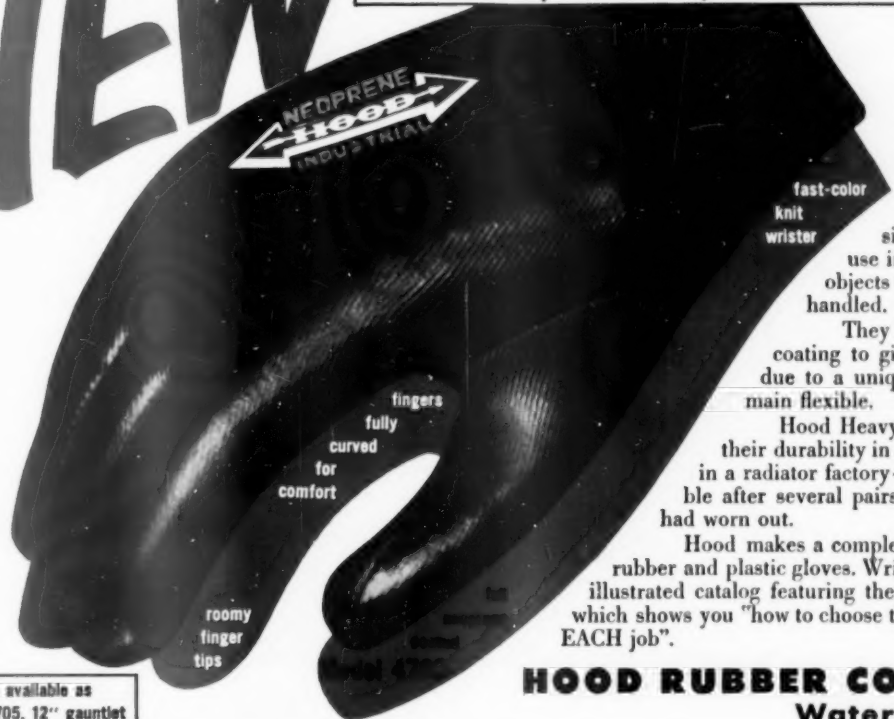
Those who plan to attend the Congress but have not yet made reservations are urged to do so as soon as possible. Past experience has shown hotel rooms will be as scarce as left-handed catchers, once Congress time draws nigh. Reservation blanks have been mailed to members and use of these will expedite handling requests. All inquiries should be addressed to Congress Housing Bureau, National Safety Council, 425 North Michigan Avenue, Chicago 11.



Dr. Paul J. Mundie, psychologist, will conduct the Early Morning Classes.

NEW

* Heavy-Duty GLOVES



Also available as
Model 7705, 12" gauntlet

* Hood's new Heavy-Duty neoprene-coated gloves were designed especially for use in plants when heavy objects with sharp edges are handled.

They have an extra-heavy coating to give longer wear, yet, due to a unique process, they remain flexible.

Hood Heavy-Duty gloves proved their durability in on-the-job wear tests in a radiator factory—they were still usable after several pairs of ordinary gloves had worn out.

Hood makes a complete line of industrial rubber and plastic gloves. Write today for our new illustrated catalog featuring the Hood Glove Guide, which shows you "how to choose the RIGHT glove for EACH job".

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Watertown, Mass.

HERE'S PROTECTION

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**FIRE
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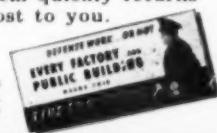
CHICAGO Watchclock System

"The first... and still the first."
LOWERS YOUR INSURANCE RATES!



It keeps track of your watchman's tracks—so accurately and positively that the CHICAGO WATCHCLOCK System is approved by THE UNDERWRITERS' LABORATORIES and by THE FACTORY MUTUALS LABORATORIES. Users earn reduced insurance rates. Thus the CHICAGO WATCHCLOCK System quickly returns its small cost to you.

Write for FREE new folder that completely describes this simple, low-cost, tamper-proof system of extra protection to property. Write for it NOW!



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THE SAFETY LIBRARY



Books, Pamphlets and Periodicals of Interest
to Safety Men

BOOKS AND PAMPHLETS

Fire Protection

Fire Prevention and Protection Fundamentals, (Combustology), by Gilbert F. Strecher. Published by The Spectator, Philadelphia: 744 p.; Price \$10.

THIS EXCELLENT BOOK deals with the over-all problems of fire protection and prevention in much the same manner as the National Safety Council's Accident Prevention Manual does with accidents. It is the place to look for the answer to a specific problem.

The book contains much practical technical data in readable form and a wealth of training material for the safety engineer, instructor, fire chief, foreman, and others whose duties include fire protection.

The sections on training inspectors and organizing fire brigades should be especially useful.

F. G. Pater

Aeronautics

Development of Crash-Survival Design in Personal, Executive and Agricultural Aircraft. By Hugh De Haven. Published by Crash Injury Research, Cornell University Medical College, 1300 York Avenue, New York 21, 1953, 17p.

Keep Your Distance. By H. G. Crowley and R. W. Chrisp. Published by Civil Aeronautics Board, 1953, 8p. For sale by the Superintendent of Documents, Washington 25, D. C. 10c (Safety Bulletin No. 187-53)

Revolutionary Scheme Proposed for Experimental Rescue and Fire Tender. By the Department of Civil Aviation, Commonwealth of Australia. Published by National

Fire Protection Association, Committee on Aviation and Airport Fire Protection, 60 Batterymarch Street, Boston 10, Mass., 1953, 4p. (Bulletin No. 93)

Seven Serious Airport Fueling Fires April 12, 1952—February 21, 1953. Published by National Fire Protection Association, Committee on Aviation and Airport Fire Protection, 60 Batterymarch Street, Boston 10, Mass., 1953, 12p. (Bulletin No. 92)

Lighting

Recommended Practice for Supplementary Lighting. Published by Illuminating Engineering Society, 1860 Broadway, New York 23, 1953, 16p. 50c.

Petroleum Industry

Annual Summary of Injuries in the Petroleum Industry for 1952. Published by American Petroleum Institute, 50 West 50th Street, New York 20, 1953, 23p. Free.

Power Transmission

Safety Code for Mechanical Power Transmission Apparatus. Revision. Published by American Society of Safety Engineers, 29 West 39th Street, New York 18, 1953, 49p. \$1.00 (ASA Code—B15.1 1953)

Railroads

Accident Bulletin No. 120. Summary and Analysis of Accidents on Steam Railways in the United States—Calendar Year 1951. Published by Interstate Commerce Commission, 1952, 121p. For sale by the Superintendent of Documents, Washington 25, D.C. 60c.

MAGAZINE ARTICLES

Aeronautics

Bell Evaluates Copter Safety. *Aviation Week*, June 8, 1953, p. 19.

Commercial Vehicles

Lipton's Reduced Accident Rate Is No Accident. By Walter H. Langseder. *Fleet Owner*, June 1953, p. 52.

Construction

A Virginia Contractor's Safety Program Pays Off. *The Constructor*, June 1953, p. 47.

Electrical Industry

Fatal Accidents in the Electric Light and Power Industry. By S. H. Young. *Edison Electric Institute Bulletin*, May 1953, p. 147.

Safety Regulations and How They Affect the Electrical Industry. By L. D. Price. *Electrical Engineering*, June 1953, p. 480.

Electricity

How Safe Is Your Plant, Electrically? *National Provisioner*, June 20, 1953, p. 14.

Eyes

Eye Injuries Constitute A Costly Problem to Industry and Cause Much Unnecessary Suffering. By Daniel C. Braun. *Industrial and Engineering Chemistry*, June 1953, p. 111A.

Fire Protection

Acetylene Gas Fires Pose Problem for Fire Service. By Paul C. Detzel. *Fire Engineering*, May 1953, p. 391.

What Can Be Done to Protect Nursing Homes and Sanitariums? By Roi B. Woolley. *Fire Engineering*, May 1953, p. 308.

Hospitals

Accent on Safety at St. Vincent's Hospital. *Safety*, June 1953, p. 6.

Housekeeping

Seven Steps to Safety and Good Plant Housekeeping. By J. A. Long. *Plant Engineering*, June 1953, p. 109.

Railroads

What About Safety and the New Man? *Railway Age*, June 15, 1953, p. 124.

Responsibility

Management and Supervisors Share Responsibility for Safety. By Robert G. Sharp. *Textile World*, June 1953, p. 286.

STONEHOUSE SIGNS

For ACCIDENT PREVENTION



CAUTION
DO NOT ENTER
WHILE MACHINERY
- IN MOTION -

SHUT DOWN
THIS MACHINE
BEFORE
CLEANING, OILING
OR REPAIRING
WAIT UNTIL ALL
MOVING PARTS STOP

DANGER
HANDS OFF

NOTICE
THIS ELEVATOR
IS FOR
FREIGHT ONLY
NOT FOR PASSENGERS

Men and Machines

Whether processes involve great batteries of complicated machinery or more simple operations, there are always hazards on the job.

For while modern machines are marvels of efficiency, men and women have to operate them, for machines cannot think.

STONEHOUSE SIGNS

...teach workers to be more careful around machinery; warn them against hazards; and stress the importance of thinking and working safely, to avoid accidents.

Stonehouse complete Catalog features hundreds of different stock-worded Accident Prevention signs. It's free. Special wordings also produced to your specifications.

DANGER
DO NOT START
THIS MACHINE

SAFETY FIRST
DO NOT OIL OR CLEAN
MACHINERY
WHILE IN MOTION

CAUTION
DO NOT OPERATE
THIS MACHINE
WITHOUT
GUARDS IN PLACE

DANGER
THIS MOTOR
STARTS BY
REMOTE CONTROL

 **Stonehouse.**

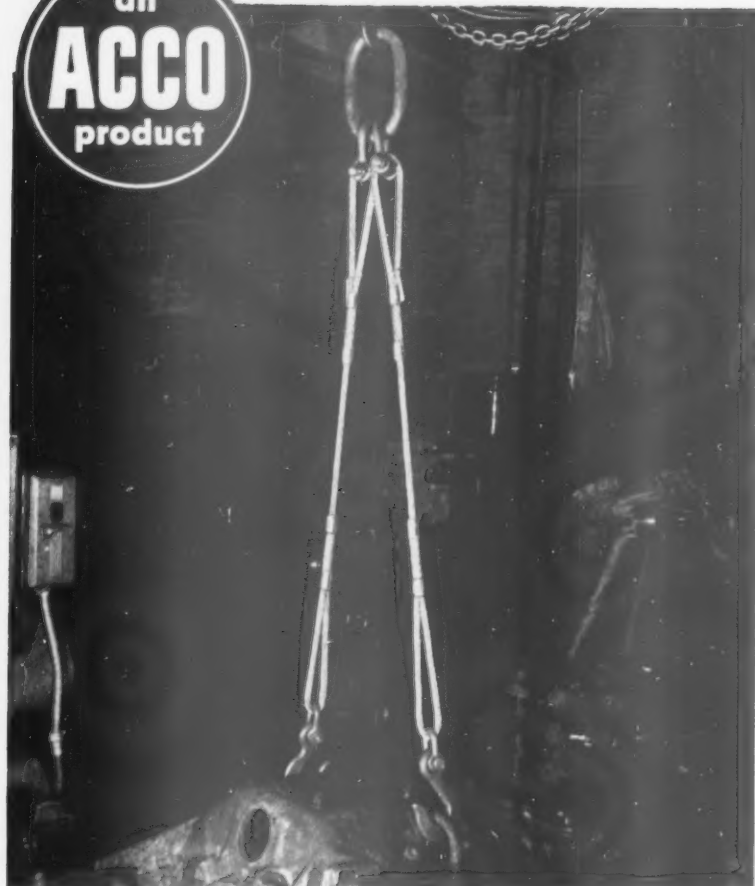
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- 4 • **These Slings and Fittings are "ACCO Registered"**—This assures you of highest quality and safety throughout.

Write today to our Wilkes-Barre office for name of the ACCO Registered Sling distributor nearest you.

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New York, Odessa, Tex., Philadelphia, Pittsburgh,
San Francisco, Bridgeport, Conn.

**ACCO
Registered
DUALOC
Slings**

COMING EVENTS



In the Field of Safety

Sept. 15-17, Cleveland, Ohio

Fifteenth Annual Ohio State Safety Conference and Exhibit. (Hotel Carter). Carl L. Smith, executive secretary, 2073 East Ninth St., Cleveland 15, Ohio.

Sept. 16-17, Harrisburg, Pa.

Annual Conference, Department of Labor and Industry. (Penn Harris Hotel). David M. Walker, secretary; General Chairman, Frank K. Roal, deputy secretary, Room 304, South Office Bldg., Harrisburg, Pa.

Sept. 17-18, York Harbor, Me.

Twenty-sixth Annual Maine State Safety Conference (Marshall House). A. F. Minchin, secretary, Industrial Safety Division, Department of Labor and Industry, Augusta, Me.

Oct. 19-23, Chicago

Forty-first National Safety Congress and Exposition (Conrad Hilton Hotel). R. L. Forney, general secretary, National Safety Council, 425 N. Michigan Ave., Chicago 11.

Nov. 17-18, Cincinnati, Ohio

Third Annual Greater Cincinnati Safety Conference (Sheraton-Gibson Hotel). Kenneth R. Miller, executive director, Greater Cincinnati Safety Council, 1203 Federal Reserve Bank Building, Cincinnati 2, Ohio.

Nov. 19, Fort Worth, Tex.

Ninth Annual Industrial Institute, sponsored by Fort Worth Safety Council and Fort Worth Chapter, ASSE. (Hotel Texas). L. W. Graff, safety director, Fort Worth Safety Council, Majestic Bldg., Fort Worth 2, Tex.

Dec. 7-8, New Orleans, La.

Louisiana Safety Conference (Roosevelt Hotel). Charles E. Doerler, conference secretary. Address: c/o Caddo Bossier Safety Council, Inc., 610 Edwards St., Box 806, Shreveport, La.

Feb. 10, Dayton, Ohio

Second Annual Miami Valley Safety Conference. (Biltmore Hotel). Marvin Purk, manager, Safety Council, Dayton Chamber of Commerce, Biltmore Hotel, Dayton 2, Ohio.

March 10-11, Philadelphia, Pa.

Twentieth Annual Philadelphia Regional Safety and Fire Conference and Exhibit (Bellevue-Stratford Hotel).

Walter W. Matthews, managing director, Philadelphia Chamber of Commerce Safety Council, Architects Building, 17th and Sansom Streets, Philadelphia 3, Pa.

Mar. 30-31, Pittsburgh, Pa.

Twenty-ninth Annual Western Pennsylvania Safety Engineering Conference and Exhibit. (Hotel William Penn). Harry H. Brainerd, executive manager, Western Pennsylvania Safety Council, 605 Park Bldg., Pittsburgh 22, Pa.

Apr. 6-9, New York

Twenty-fourth Annual Greater New York Safety Conference and Exposition. (Statler Hotel). Paul F. Stricker, executive vice-president, Greater New York Safety Council, 60 East 42nd St., New York 17.

Apr. 20-22, Detroit, Mich.

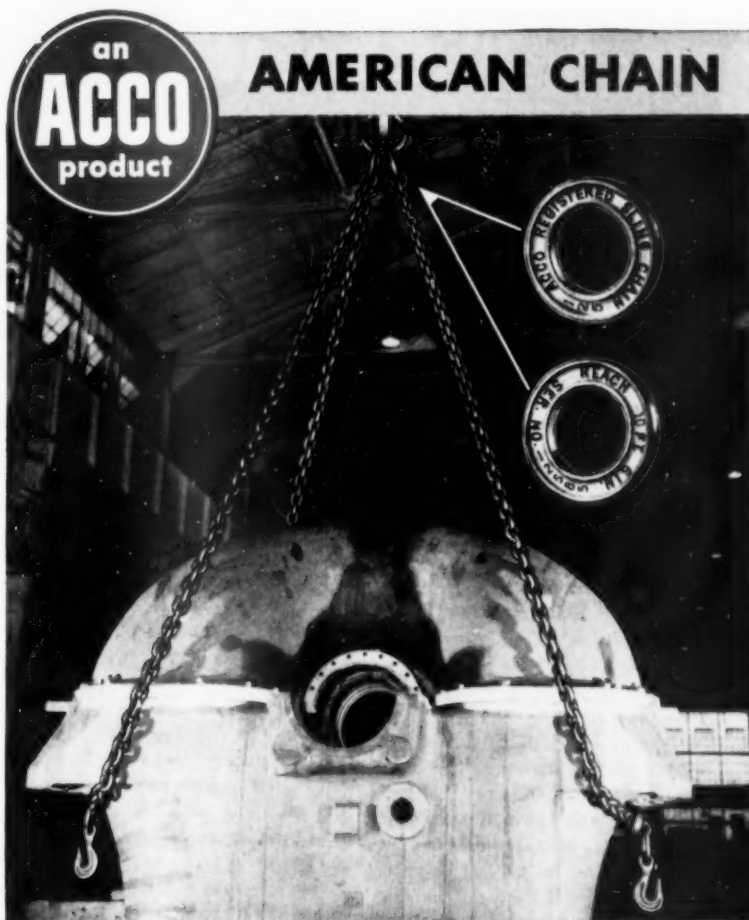
Michigan Safety Conference. (Sheraton-Cadillac Hotel). Elon J. Schantz, executive secretary, c/o Consumers Power Co., 129 Pearl Street, N.W., Grand Rapids 2, Mich.

Warns From Both Directions

Reversible warning and information signs seem to have solved the safety reminder problem for the Ethel Corp., of Baton Rouge, La.

The tubular frame stands three feet high, and the signs are mounted on rings, similar to a loose-leaf notebook. Jasper Jines, a general foreman, developed this portable frame and signs.

Signs read the same on both sides, and each frame carries four messages. Since the frame and signs are so readily portable, safety warnings and information signs can be brought to nearly every job location.



"Why do we use American Chain?"

"For two reasons," said this manufacturer of heavy machinery. "First, we have used American Chain successfully for years. Second, the high strength alloy it is made from permits using smaller diameter chain which is hooked up easily by our men. And the men like the way the grab hooks slip over the links and set themselves securely. I think they just feel safer working with American Chain."

This AMERICAN CHAIN user is referring to our 125 Endweldur alloy steel, heat-treated ACCO Registered sling chain with our series 40 drop-forged grab hooks.

No matter what chains you require, AMERICAN has them and will furnish chains that will last longer... and cost less to use. Call your AMERICAN CHAIN distributor today and let him make recommendations. Or write to our York office for Bulletin DH-314.

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INDUSTRIAL HEALTH



*Abstracts of current literature
on Industrial Hygiene, Medicine, and Nursing*

BY F. A. VAN ATTA
Industrial Department, NSC

Fly Ash Disposal

Fly Ash Collection in Industrial Experience, by B. S. Norling. The American Industrial Hygiene Association Quarterly 14:103-108 (June 1953).

THIS REPORT concerns a plant built in 1928 approximately 10 miles from the nearest city, away from other industries and in a sparsely settled area. No provision was made for fly ash suppression when the power plant was put up.

At the end of World War II a number of small industrial plants moved into the area and the community became thickly settled. Soon there were complaints of dust which were determined to be largely due to fly ash. This is a typical picture of the development around many American plants in the last few years. At this time there were eight pulverized coal-fired boilers in the power house providing a peak steaming rate of 930,000 pounds per hour and an average rate of approximately 750,000 pounds per hour. The ash content of the coal averages about 9 per cent of which approximately 85 per cent is carried out the stack as fly ash.

The fly ash from these furnaces contains approximately 20 per cent carbon which gives it a dark color. The furnaces burned approximately 73,500 pounds of coal per hour and discharged approximately 5,600 pounds per hour of fly ash into the air. It was calculated that mechanical collectors would reduce this fly ash concentration by about 85 per cent at a cost of \$420,000 and electrostatic precipitators would reduce it by approximately 95 per cent at a cost of \$515,000 for installation.

Since there was no local ordi-

nance to fix a minimum required efficiency for the ash collectors, it was decided to follow the American Society of Mechanical Engineers Model Code which is widely accepted and is one of the most stringent ordinances. This Code could be met by the mechanical collectors. It was recognized the mechanical collector would not collect the very fine particles and consequently would not give a clear gas leaving the stack. However, the mechanical collector was considered to give sufficient cleaning and was satisfactory to the local civic organization.

The collectors were installed during normal overhaul time so they did not require an extra interruption of operations in the power plant. Since the plant had not been planned for fly ash collection the place for the collector was a little congested but it was possible to install it by putting the hopper through the roof. Collected ash was picked up by a water ejector and pumped as a slurry to a lake on the premises formed by throwing a low dam across a low place on the grounds.

On the first test of efficiency the over-all efficiency of the first four units was 87½ per cent.

Insect Control

Insect Control by Chemicals, by A. W. A. Brown. John Wiley and Sons, Inc., New York 1951 7VII plus 817 pages, \$12.50.

TO ONE INTERESTED in almost any aspect of the control of insects by chemicals, this volume would be well worth the cost for the bibliographic references alone. None of the eleven chapters has less than

100 references to the original literature and the number on some chapters runs over 400. Even the collection of such a bibliography must have been a monumental task.

The text is apparently designed primarily for the economic entomologist. It is both a theoretical discussion of the nature and actions of insecticides and in two chapters a practical discussion of the types of equipment used and the methods of application of insecticides for various purposes from the control of clothes moths in the home to the control of cottonboll weevil and forest insects by dusting and spraying from aircraft.

In addition to these discussions of the theoretical and practical aspects of insect control, there are chapters on the hazards of various insecticides to plant growth as well as a considerable discussion of the relationship of the use of insecticides and the natural balance of both insect and animal populations. This discussion covers the accidental increase of pest insects by the destruction of predatory species by the use of insecticides as well as the development of various resistant species of insects due to accelerated selection of a special part of the insect population.

To the specialist in industrial health, the discussion of the toxic hazard to man of chlorinated hydrocarbon fumigants seems to be quite inadequate although it may suffice for the control of acute exposures in connection with fumigation and spraying operations. It certainly would not be satisfactory

Now! AVAILABLE IN ANY OF 4 MODELS!



PLASTIC FRAME SPECTACLE TYPE SAFETY GOGGLES

Direct From the Manufacturer

The Penoptic "707 Series" goggles assures workers of dependable protection, comfort and a distinctly personal appearance. All models are of tough, lightweight, non-inflammable plastic. High line style, drop-eye shape and flesh color combine to satisfy workers' demand for a more personal look. This new series offers a choice of:

- Spatula or cable type temples . . .
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For descriptive literature and prices write directly to . . .

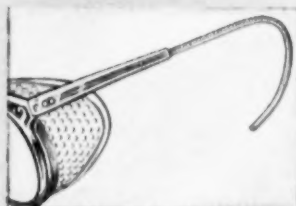
PENNSYLVANIA OPTICAL COMPANY
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Known for Fine Ophthalmic Products Since 1896



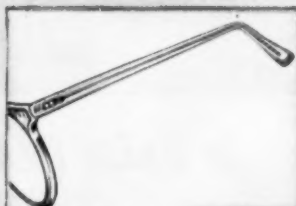
MODEL 707

Wire core temples with cable wound ends.



MODEL 707S

Plastic side shields, wire core temples.



MODEL 707P

Spatula temples, wire reinforced.



MODEL 707R

Rocker-type nose pads supported by adjustable metal arms.



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WRIGHT
Low Headroom
SPEEDWAY HOIST



Is Hoist Headroom a Headache for You?

• Look at this. The bearing point of the hook of this WH-1 Low Headroom WRIGHT Speedway Hoist can be raised so it is only 12¼ inches below the beam. And this is a 1-ton hoist with the five key features that make WRIGHT Speedways last longer and require less servicing.

This hoist has heat-treated and surface-hardened alloy steel gears, hard alloy silver electrical contacts in controller, heavy duty crane type safety limit stop, automatic multiple disc load brake, and ball bearing gear shafts.

Add to this grooved cable drums, improved plow steel preformed cable, concealed motor wiring, completely enclosed and ventilated weatherproofed housing, etc., and you'll have a combination of features found only in the WRIGHT Speedway Hoist.

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Trolleys
Cranes

for indicating the necessary control for men exposed over long periods in industrial processes. The statement on page 474 that methyl bromide is not highly toxic is also quite startling to one familiar with the severe injuries which have been produced by its use as a fire extinguisher and as a fumigant in industry.

With the exception of this discussion of the chlorinated hydrocarbons, which are in many instances surprisingly toxic by prolonged exposure to low concentrations as compared to their relatively low acute toxicities, the discussions of hazard to humans and other mammals are quite adequate and certainly are much more than one finds in the average discussion of control of insects by chemical means.

The book will make an excellent source book for anyone concerned either with the elimination of insects in the plant or in the field or in the control of human and animal exposures to the chemicals used in the elimination of insects.

Insulation Board to Be More Fire-Resistant

SOME INSULATION BOARD will spread fire several times faster than wood. It has been a major factor in many high loss of life fires in dwellings, nursing homes and hospitals. However, insulation board can be treated to slow the spread of fire—and manufacturers have just agreed to treat all board from now on with a flame-resistant coating.

This industry-wide safety move was revealed recently by Percy Bugbee, general manager of the National Fire Protection Association of Boston, in a speech before the New England Association of Fire Chiefs.

The industry's action was voluntary. Mr. Bugbee told the chiefs. "Insulation boards are an important and widely used building material and the treatment of these boards with flame-resistant coatings should substantially reduce the life hazard," he said.

Patience is the ability to idle your motor when you feel like stripping your gears.

WORK *in Safety...* WALK *in Comfort*

DORSEY SAFE-T-SHOES GIVE FULL PROTECTION

Protection against accident... Protection against fatigue!

Ruggedly built of select materials from the patented ARMORITE steel-flanged toe to the finest horsehide and cowhide uppers available, Dorsey Safe-T-Shoes are designed to furnish protection where protection counts most, plus solid comfort for long hours under the most severe working conditions. Compare Dorsey Safe-T-Shoes with them all and you, too, will say Dorsey gives greater protection . . . longer wear . . . more economy . . . plus all-day comfort on the roughest jobs.



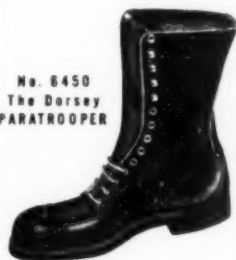
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The Dorsey CHAMPION

Outstanding in every way, the Champion is made from triple tanned shell horsehide with full leather toe lining, Dacron stitching and steel arch. It offers the maximum in Safety and Comfort on any job.



No. 7200
The Dorsey
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Dorsey dress Safe-T-Shoes give the same comfort and protection plus a style and quality comparable with expensive nationally advertised footwear . . . at half their price.



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Mr. Safety Engineer:
Clip and mail this coupon today!

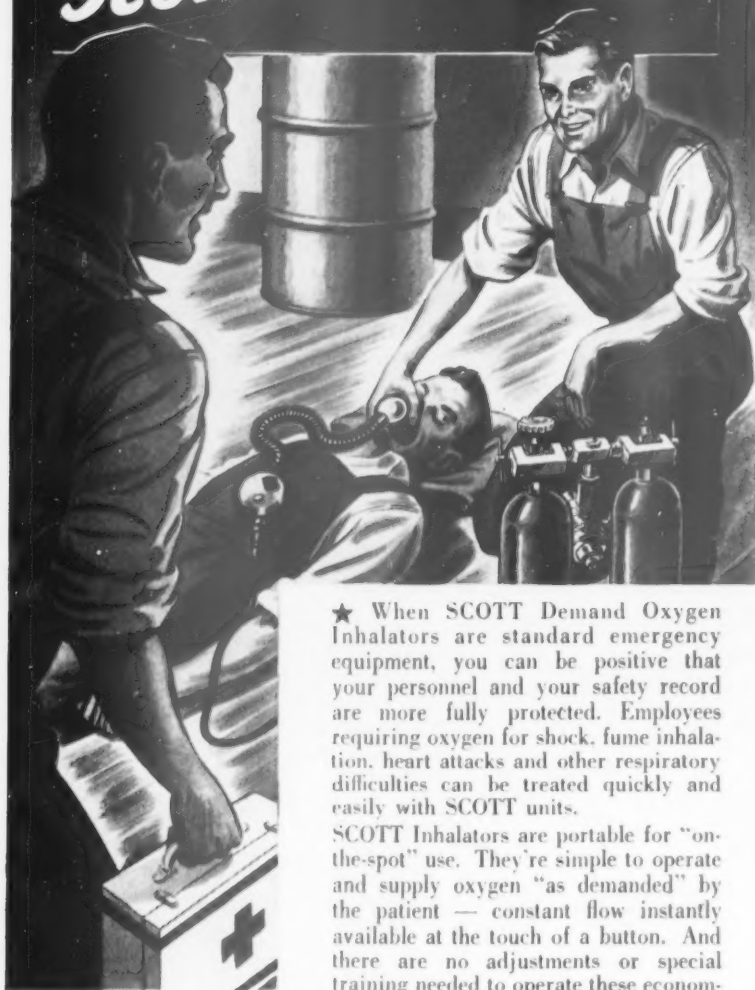
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Gentlemen: Please send me one pair of your
No. _____ Size _____ for free inspection. If not completely satisfied I agree to return these shoes to you within ten days.

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COMPANY _____
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now... thanks to our
Scott**



Type B—illustrated above, with carrying case.

Type A—for fixed installation.

★ When SCOTT Demand Oxygen Inhalators are standard emergency equipment, you can be positive that your personnel and your safety record are more fully protected. Employees requiring oxygen for shock, fume inhalation, heart attacks and other respiratory difficulties can be treated quickly and easily with SCOTT units.

SCOTT Inhalators are portable for "on-the-spot" use. They're simple to operate and supply oxygen "as demanded" by the patient — constant flow instantly available at the touch of a button. And there are no adjustments or special training needed to operate these economical units. SCOTT is the low-cost way to keep safety records high.

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It Stands the Acid Test

Man from Mars?

No. Neither does the photograph below have any connection with "The Thing." Nor is it a news shot of the U. S. Navy's latest experimental, jet-propelled, rocket-fired, subtropospheric, survival suit, completely articulated, provided with hot and cold folding pressurized sections, emergency rations, flotation gear and Gibson Girl, radio, that is.



It's an employee of Weyerhaeuser Timber Company's Everett, Wash. pulp division, dressed in one of the company's new acid-proof outfits worn by men working around sulfuric acid.

All parts of this suit are marked with pink paint, the same color used to identify acid pipes. This keeps the equipment from being used in any other areas of the plant. The pink letters stand out like a light-house in a fog.

Suits are stored near the acid-making equipment in special lockers, each containing a jug of mild alkaline solution for emergency use to neutralize acid on the skin.



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HOME of

the original **PAX-LANO-SAV**

This modern plant is the home of the original PAX HEAVY DUTY, the granulated skin cleanser that for so many years set the standards for safety and effectiveness in industrial skin cleansing. Now, although PAX-LANO-SAV Heavy Duty, the successor to PAX HEAVY DUTY is vastly improved in safety, effectiveness and economy, progress never ceases at PAX. Our PAX Research and Testing Laboratory is constantly seeking and trying new materials, new methods and new machinery to make a superlative product even better. Whenever improvements are made, they are first tested exhaustively in the laboratory and the field before being incorporated into the product and passed along to PAX customers. In this way, PAX-LANO-SAV Heavy Duty and the whole PAX line is always kept up to the latest scientific development and the PAX position of leadership in the skin cleanser field is upheld.



PAX-LANO-SAV Heavy Duty Granulated Skin Cleanser has been awarded the Seal of Acceptance of the Committee on Cosmetics of the American Medical Association.



LOOK for the PAX ROOSTER
Over 25 years of **RESEARCH, SERVICE and**
RECOGNITION STAND BEHIND EVERY
PAX PRODUCT YOU BUY.

PAX

REAL SAVINGS IN SKIN CLEANSERS

You can save "first cost" money by buying almost anything that is cheaply made—including industrial skin cleansers. However, no matter how low a price you pay, checking will soon show you that cheap products don't pay because inferior performance always results in increased consumption. In thousands of installations all over the country, PAX-LANO-SAV Heavy Duty has proven itself to be in actual use cost one of the most economical skin cleansers available in addition to its unsurpassed performance. Try it today at our expense and see not only how much better results you get, but how much money you can really save. Using your letterhead send for a free half pound package and try it. Then a plant test, still at no cost to you can be arranged and you're on your way to the savings and satisfaction that PAX customers everywhere take for granted.

There is a complete line of PAX granulated and powdered skin cleansers, waterless skin cleansers, special purpose skin cleansing creams, maintenance cleaners and degreasing compounds. Send for full details today.

1534

When you specify any PAX Product you get as an extra dividend the experience and ability of PAX Technicians acquired through over a quarter century of continuous research and development.

PERSONALS



Warren Cook Joins U. of Michigan Faculty

WARREN A. COOK, director, division of industrial hygiene and engineering research, Zurich-American Insurance Companies, Chicago, resigned July 1 to enter the field of education. He has been appointed associate professor of industrial health and hygiene in the School of Public Health and research associate in the Institute of Industrial Health at the University of Michigan, Ann Arbor. He will continue to be associated with the Zurich in a consulting capacity.

LLOYD E. GORDON, who has been with the Zurich industrial hygiene division since 1943, will become its new director.

Mr. Cook, who recently received the Donald E. Cummings Memorial Award of the American Industrial Hygiene Association for 1953, was graduated from Dartmouth College and also attended the Yale University Graduate School. He served as chief industrial hygienist in the Connecticut State Department of Health, Bureau of Industrial Hygiene, for several years before going into insurance work. In 1937 he joined the staff of the Zurich to organize and direct the division of industrial hygiene and engineering research.

He is the author of many papers on the technical and general aspects of industrial hygiene. His report on *Maximum Allowable Concentrations of Industrial Atmospheric Contaminants* is used extensively as a reference work in this field.

Mr. Cook has served as president of the American Industrial Hygiene Association; editor of its quarterly publication; and associate editor of the *Journal of Indus-*

trial Hygiene and Toxicology and also of *Industrial Medicine and Surgery*. He is a member of the Industrial Hygiene Foundation's Committee on Chemistry and Toxicology; vice chairman of the Industrial Hygiene Section of the American Public Health Association; chairman of the Development Committee of the American Industrial Hygiene Association; a member of the Committee on Toxic Gases of the American Standards Association; and of the Committee on Methods of Atmospheric Sampling and Analysis, American Society for Testing Materials.

Mr. Gordon is a chemical engineering graduate of the University of Michigan. He was associated with the Industrial Hygiene Division of Chrysler Corporation and later with the Bureau of Industrial Hygiene of the Michigan Department of Health as an industrial hygiene engineer. In 1943 he joined the Zurich as an industrial hygiene engineer, and in 1951 he was made assistant director of the division of

industrial hygiene and engineering research.

He is a member of the American Industrial Hygiene Association, a member of its Development Committee, and of the board of directors of its Chicago section. Mr. Gordon is also a member of the American Chemical Society.

G. H. Deike Heads Mine Inspectors' Institute

GEORGE H. DEIKE, chairman of the Board of Mine Safety Appliances Company, Pittsburgh, was elected president of the Mine Inspectors' Institute of America at the 43rd Annual Convention of the institute held recently in Birmingham. He succeeds John M. Malloy, Oklahoma City, chief of the Oklahoma Department of Mines.

Joins NSC Staff

LEONARD C. SMITH has joined the Industrial Department of the National Safety Council as an engineer.

Before joining the Council staff, Mr. Smith was a managing editor with the American Technical Society, and also co-authored two technical books: *Applied Drawing and Sketching* and *Metalwork for Industrial Art Shops*. He was educated at the Platteville (Wis.) State College from which he was graduated with a B.E. degree.

E. D. MACKENZIE, assistant superintendent of American-Associated Insurance Companies' Head Office Engineering Division at St. Louis, has been promoted to a new assignment as staff assistant to Vice-President Edgar F. Gieck with the rank of superintendent.

Mr. Mackenzie will be succeeded as assistant superintendent in the Engineering Division by AULTON D. MULLENDORE, former engineering supervisor at the Companies' Hartford Branch. CHARLES F. HUNTER, who has been stationed at the Syracuse Service Office, will become engineering supervisor at Hartford.

—To page 84

WANTED

Two Safety Engineers for Aeronautical Research and Development Installation in Tennessee. Engineering Degree and two to eight years experience. Salary range \$5000 to \$7000 per annum. Write Mr. Earle DuRard, ARO, Inc., Tullahoma, Tennessee.

WANTED

Safety and Fire Prevention Engineer. Well established company with multiple plant operations has opening in its industrial relations department. Must be graduate engineer and under age 35. Several years industrial experience preferred. Responsible for over-all safety and fire prevention program. Traveling required. Home office Chicago. Address Box 433 NATIONAL SAFETY NEWS.

SAFETY ENGINEER

Western Department of a large multiple line stock insurance company with an excellent agency plant desires man to travel Southern Wisconsin and Northern Illinois, excluding Chicago, with headquarters in territory. Unusual opportunity with many employee benefits. Automobile furnished. In reply, state age, experience, education and salary desired. Address Box 434, National Safety News.



**Hexachlorophene in Formula #99 Antiseptic Soap
cuts absenteeism by combating dermatitis and infections**

Dermatitis steals thousands of man-hours from industry yearly. A small cut becomes infected, and a day is lost; an abrasion turns ugly, and three days are gone. Many of these cases of dermatitis are due directly to skin bacteria that cause infection—and protection against these bacteria means lower absenteeism. You can provide effective protection against infection by specifying Formula #99 Liquid Antiseptic Soap for your washrooms.

Formula #99 contains Hexachlorophene—the first germicidal agent ever found that keeps its antiseptic power in soap. Because of its Hexachlorophene content, regular daily washing with Formula #99 removes up to 95% of skin bacteria.

Ordinary washroom soaps don't have this antiseptic power. They leave the bacteria which can aggravate any small cut, skin irritation or abrasion into a case of dermatitis. And, to help replace natural skin oils, Formula #99 is *lanolated*—another advantage not found in the usual washroom soap.

Send the coupon today for further information and samples. See for yourself how Formula #99 can save man-hours by combating dermatitis.

ARMOUR *Industrial Soap Department*

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CLIP AND MAIL THIS TODAY!

Please send me:

- ☐ "Antiseptic Soaps for Industrial Use"
☐ Sample of Formula #99 Liquid Antiseptic Soap

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Firm Title

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City Zone State

FOR DISTINGUISHED SERVICE



National Safety Council Awards for Outstanding Records

THREE types of awards for outstanding performance in industrial accident prevention are provided for in the "Plan for Recognizing Good Industrial Safety Records" adopted in January, 1952, by the Industrial Conference and the Board of Directors of the National Safety Council.

The three types of awards are:

1. **THE AWARD OF HONOR**, the highest award, replaces the Distinguished Service to Safety Award. It goes to industrial establishments whose experience meets rigorous statistical standards, even though it may not be injury-free. It also goes to those which complete 3,000,000 manhours without a disabling injury.

2. **THE AWARD OF MERIT** has similar but less exacting requirements. The standards for non-perfect records are somewhat lower, and the minimum number of injury-free manhours needed to qualify is 1,000,000.

3. **THE CERTIFICATE OF COMMENDATION** is given only for no-injury records covering a period of one or more entire calendar

years and involving exposure of 200,000 to 1,000,000 manhours.

For qualifying calendar-year experience, all three types of awards are made automatically on the basis of annual reports submitted to the Council by members. The Award of Honor and the Award of Merit may also be made on special application in two types of cases.

1. Where a qualifying total of injury-free manhours is accumulated in some period other than a calendar year.

2. Where a current period of two or more years is to be used in evaluating injury rate improvement.

Publication of awards under this plan succeeds "The Honor Roll" department formerly published in the NATIONAL SAFETY NEWS. The foregoing is but a synopsis of the award plan. For a more complete and precise statement of eligibility requirements, members should refer to the plan itself. Details may be obtained by writing to Statistics Division, National Safety Council.

AWARDS OF HONOR

Algoma Plywood & Veneer Co., Algoma, Wis. (Entire company).

American Telephone & Telegraph Co., New York City (Entire company).

Apex Electrical Mfg. Co., Cleveland, Ohio (Main plant).

Bartgis Brothers Co., Baltimore, Md., Catonsville plant.

Bethlehem Steel Corp., Buffalo Works.

—Hanover Quarry.

—Lackawanna Plant.

—Williamsport Plant.

Cincinnati Gas & Electric Co., Cincinnati, Ohio (Entire company).

Consolidated Edison Co. of N. Y., New York City (Entire company).

Edward Hines Lumber Co., Westfir, Oregon (Plywood division).

E. I. duPont de Nemours & Co., Bengel Laboratory.

—Chattanooga Plant.

—Chemical Dept.

—Fairfield Plant.

—Flint Plant.

—Fort Madison Plant.

—Graselli Research Laboratory.

—May Plant.

—Old Hickory Rayon Plant.

—Philadelphia Graselli Works.

—Technical Laboratory.

—Toledo Finishes Plant.

—Wilmington Office Buildings.

—Wilmington Shops.

—Yerkes Rayon Plant.

—Yerkes Research Laboratory.

Equitable Gas Co., Pittsburgh, Pa. (Entire company).

Fairbanks, Morse & Co., Beloit Works.

Ferro Corp., Cleveland Plant.

Firestone Tire & Rubber Co., Akron, Ohio (Entire company).

—All Akron Plants.

—Memphis Tire Plant.

Fuller Manufacturing Co., Kalamazoo, Mich. (Entire company).

General Electric Co., Milwaukee, Wis., X-Ray Dept.

General Foods Corp., Carton & Container Div.

General Steel Castings Corp., Eddystone, Pa., unit.

Harbison-Walker Refractories, Mt. Union Quarry.

Keebler-Weyl Baking Co., Philadelphia, Pa. (Entire company).

Northrop Aircraft, Inc., Calif. (Entire company).

O. B. Andrews Co., Fountain City, Tenn.

Oliver Corp., Battle Creek, Mich., Aviation division.

Otis Elevator Co., New York City, Yonkers Works.

Owens-Illinois Glass Co., Clarion, Pa., Plant 17.

Philippine Air Lines, Manila, Philippine Islands, Manila & Nichols Field Ground Operations.

Pillsbury Mills, Inc., Minneapolis, Minn., Unit.

Pittsburgh Plate Glass Co., Works No. 4, Ford City, Pa.

Servel, Inc., Evansville, Ind. (Entire company).

Speer Carbon Co., St. Mary's, Pa., Plant.

United States Steel Corp., Anrondale Limestone Mine, Boyers, Pa.

—Buffalo Creek Limestone Mine.

—Hillsville Limestone Quarry.

—Kaylor Limestone Mine.

Western Electric Co., Inc., Allentown, Pa., Plant.

Westinghouse Electric Corp., Electric Appliance Div., Mansfield, Ohio.

—To page 92

TO SAFETY ENGINEERS CONCERNED WITH MECHANICAL PRESS FAILURE!

These are the loss possibilities when an air-controlled mechanical press fails by stroking *when it shouldn't!*

Injury to the operator and its unfortunate, expensive consequences.

Damage to costly dies and to automatic feeding devices.

Loss of production while the press is "down" for repairs.

And remember, the finest electrical controls will not prevent a "repeat" if the air-control valve does not reverse when the circuit is broken.

HERE'S A PRESS CONTROL VALVE YOU AND YOUR MANAGEMENT SHOULD KNOW ABOUT

It's the Hannifin DUAL 3-Way Pilot-Master Valve, "P-M" Model BB-5, developed specially for the safe control of air-operated clutches and brakes on mechanical presses. This new valve gets air in and out faster **TO SPEED PRODUCTION.**

WHY THIS DUAL 3-WAY VALVE OFFERS GREATER PRESS SAFETY

- Two 3-way valves in one housing. Both valves must operate to start the press, but if... for any reason... only one valve reverses, the entire unit fails safe and the press stops.
- Pneumatically* interlocked in the pilot sections. Neither electrical nor mechanical failure of either solenoid or pilot valve mechanism can prevent the other pilot section from reversing BOTH main valves.
- Pneumatically* interlocked in the main valve sections. If either main valve sticks in the "on" position, its output has a clear path to exhaust through BOTH exhaust ports.

*Pneumatic interlocking eliminates dependence on levers, spring-loaded pins and all other mechanical "gadgets."

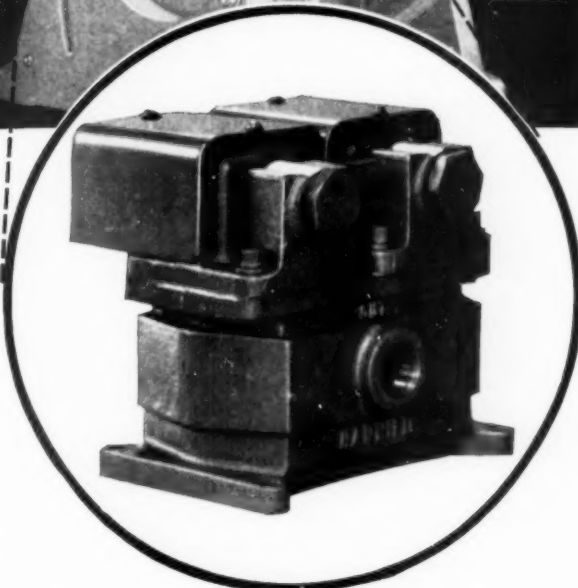
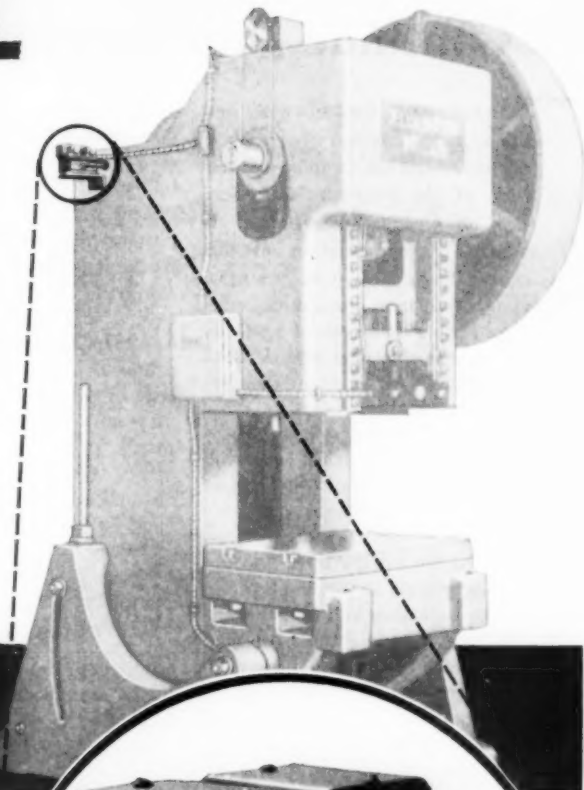
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in These Leading Industrial Centers**

Atlanta, Buffalo, Cincinnati, Cleveland, Dallas, Dayton, Denver, Detroit, Houston, Los Angeles, Milwaukee, Minneapolis, Moline, New Orleans, New York, Philadelphia, Pittsburgh, Richmond, Va.; Rochester, N. Y.; St. Louis; Seattle; South Bend, Ind.; Washington, D. C.; Worcester, Mass. In Canada: TEM Sales Company Limited, Toronto and Windsor.

HANNIFIN

Hydraulic Presses • Pneumatic Presses • Hydraulic Riveters
Hydraulic Cylinders • Air Cylinders • Air Control Valves

National Safety News, August, 1953



mail the coupon today!

Hannifin Corporation,
1142A S. Kilbourn Ave., Chicago 24, Illinois

Please send me information on your new Press Control valve.

☐ All Hannifin Air Control Valves ☐ Hannifin Air Cylinders

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Position.....

Company.....

Address.....

City..... State.....

President's Conference to Continue Job Safety Efforts

PRESIDENT EISENHOWER has called upon Secretary of Labor Martin P. Durkin to intensify the work of the President's Conference on Occupational Safety, a voluntary organization of top leaders from American business, labor, insurance companies, education, State and Federal agencies and private safety groups devoted to reducing accidents in the Nation's workplaces.

"An annual toll of 15,000 deaths and 2,000,000 injuries occurring in the course of employment is an economic and social waste we cannot afford. Such injuries mean a loss to the worker in health and earning power, to the employer in lower production and higher operating costs, and to the Nation in manpower skills. Management, labor and public and private agencies share an obligation to safeguard their fellow citizens employed in the workplaces of the Nation. It is appropriate that the Federal Government provide a means of bringing together these vast resources to curb accidents to workers," the President wrote.

The Chief Executive expressed the hope that States having basic authority over the health and safety of workers, "will be stimulated to quicken and extend similar endeavors."

The Secretary of Labor will serve as General Chairman of the Conference, Vincent P. Ahearn, executive secretary of the National Sand and Gravel Association, as its executive director, and William L. Connolly, Director of the Labor Department's Bureau of Labor Standards, as Chairman of the Conference Coordinating Committee. An early meeting of that Committee has been called.

Upon receipt of the President's letter, Mr. Durkin said:

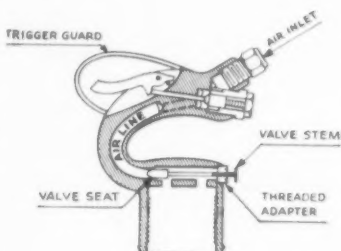
"I am glad to intensify the work of this typically American institution which under the President's

sponsorship mobilizes the voluntary resources of the Nation to save human lives and limbs in industry. Since its organization, this Conference has played an important part in reducing injury frequency rates throughout the country. It has stimulated the calling of some 20 Governors' Conferences, many of whose safety proposals are embodied in their laws or practices today. I hope we may now make even more progress."

The text of President Eisenhower's letter follows:

Invents Trigger Guard For Pneumatic Tools

Operators of pneumatic tools no longer need fear accidentally tripping the trigger of their machine, according to Charles F. Boyer, of the Keystone Portland Cement Company, Bath, Pa.



Mr. Boyer was recently granted patents on a new type of trigger safety guard and an automatic air shutoff valve, both to be installed on standard pneumatic tools.

The trigger guard is composed of a single piece of shaped 13-gauge steel and tack welded to the handle of either an old or new air tool. According to Mr. Boyer, his invention makes it virtually impossible to accidentally start an air tool equipped with this device. He reports they are simple and inexpensive to install.

"Thank you for telling me of the work of the national conference organized to reduce occupational accidents to American workers. An annual toll of 15,000 deaths and 2,000,000 injuries occurring in the course of employment is an economic and social waste we cannot afford.

"Such injuries mean a loss to the worker in health and earning power, to the employer in lower production and higher operating costs, and to the Nation in manpower skills.

"Management, labor and public and private agencies share an obligation to safeguard their fellow citizens employed in the workplaces of the Nation. I am glad, therefore, that the Coordinating Committee of the conference wishes to have this voluntary activity continued. It is appropriate that the Federal Government provide a means of bringing together these vast resources to curb accidents to workers.

"I ask you to convey to the hundreds of men and women who have contributed voluntarily to the work of the conference, my desire that the program be intensified. Because the States have basic authority over the health and safety of workers, I hope they will be stimulated to quicken and extend similar endeavors.

"You are authorized to proceed with this work, in cooperation with all interested groups, under the title: 'The President's Conference on Occupational Safety.'

"Please continue to keep me informed of its progress."

Posters Warn Against Blasting Caps

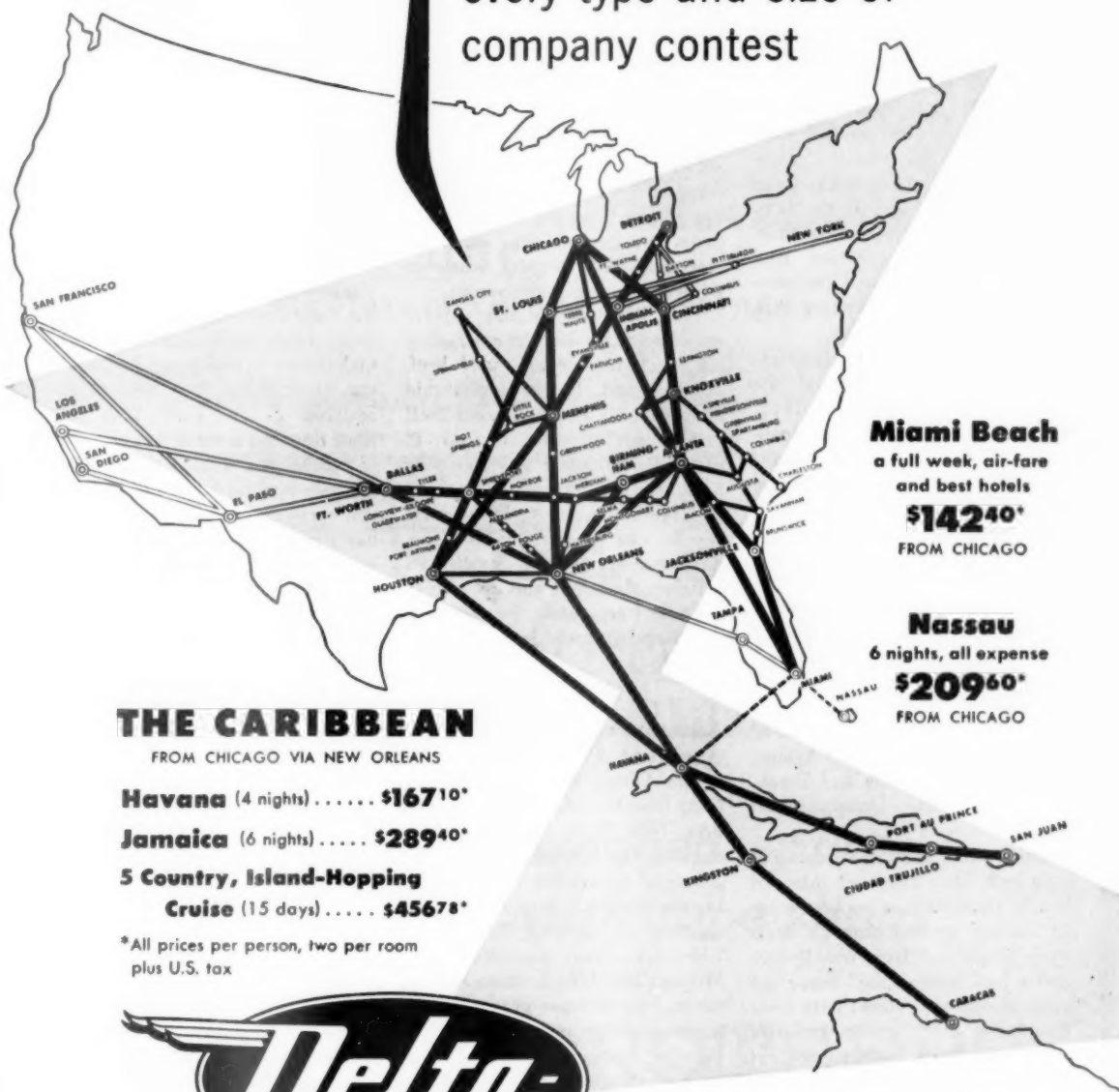
A NATIONWIDE CAMPAIGN warning boys and girls, "Don't Touch a Blasting Cap," is being conducted by the United States Post Office Department and the Bureau of Mines.

Posters picturing four common types of blasting caps were distributed for display in 41,000 United States post offices. The posters warn boys and girls "If



DELTA-C&S

vacation incentive programs
offer the **ideal prizes** for
every type and size of
company contest



Miami Beach
a full week, air-fare
and best hotels
\$14240*
FROM CHICAGO

Nassau
6 nights, all expense
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THE CARIBBEAN

FROM CHICAGO VIA NEW ORLEANS

Havana (4 nights) **\$16710***

Jamaica (6 nights) **\$28940***

**5 Country, Island-Hopping
Cruise** (15 days) **\$45678***

*All prices per person, two per room
plus U.S. tax



A complete folio containing samples of free
bulletin forms, posters, folders, etc. available
for all types of company contests.

General Offices: Atlanta, Georgia

you find a cap don't touch it. Tell a policeman about it."

Director John J. Forbes, of the Bureau of Mines, Ormonde A. Kieb, Assistant Postmaster General—Bureau of Facilities, Roy M. North, Postmaster, Washington, D. C., and Richard F. Webster, executive secretary of the Institute of Makers of Explosives, opened the campaign by taking part in the official posting of warning displays in the Washington, D.C. Post Office.

Stressing importance of the warning to children, Mr. Webster pointed out such caps are necessary in the nation's industry to detonate blasts for mining coal, quarrying stone, clearing farm lands, and for digging tunnels and foundations for buildings. Summer is a peak construction time. More blasting caps are used. And children roam afield and are more likely to come upon blasting caps that have been discarded.

Cooperating in the nationwide distribution of posters and the safety movie, "Blasting Cap," made available free by the Institute of Makers of Explosives are: Department of Elementary School Principals, National Association of Secondary School Principals, National Sheriffs' Association, International Association of Chiefs of Police, International Association of Fire Chiefs; National Council of Y.M.C.A.s, Boy Scouts of America, Future Farmers of America chapters, 4-H Clubs, Camp Fire Girls, and in a number of states Agricultural County Agents, Congresses of Parents and Teachers, and Home Demonstration Agents.

The posters show children what caps look like. They are tubes of bright aluminum or copper, a little thinner around than an ordinary pencil and from one to five and a half inches long. Some are open at one end, others have fuses inserted in that opening, and still others fired by electric current have insulated wires in one end. Know what a blasting cap looks like and beware, is the theme of the poster drive.

Ever-Ready Salesmen



The "land of sky blue waters" sometimes becomes the land of snow and blizzards. Salesmen for the Theo. Hamm Brewing Company, St. Paul, Minn., carry an emergency kit to meet whatever the weather man may concoct.

Paul Schuler, Hamm's personnel director, devised an emergency kit which includes: Canned beef, sausage and beans and liquid chocolate, all of which heats itself just by adding water, is ready to eat in ten minutes; two chocolate bars, small packages of cookies, package of cigarettes, knife, fork, spoon, can opener, plastic cup, hand warmer, box of waterproof matches, flashlight and eye shield.

Packed separately for salesmen are flares, first aid kit, fire extin-

guisher, hand warmer fluid, shovel and chains. Suggested additional equipment includes a heavy coat, overshoes, cap with ear flaps and heavy gloves.

The ever-ready salesmen have already been equipped with sleeping bags for emergency use. The men drive suburbans and can make room in their cars for sleeping by pushing their advertising material to one side. This has been done on several occasions.

Schuler has written instructions for salesmen on how and when to use various emergency items. However, ingenuity is sometimes necessary. One salesman who found his hotel room too cold for sleeping, promptly went out to his car for his downlined sleeping bag.

Announce Scholarships in Accident Prevention

The Center for Safety Education, Division of General Education, New York University, announces the establishment of ten grants of twenty-five dollars each, for the academic year 1953-54, in memory of the late W. Graham Cole, who was associated with Metropolitan Life Insurance Company. Five of these grants will be made each term to students of promise who need such assistance in beginning or continuing their studies in the Center's evening program.

Awards will be made by the

Center for Safety Education, following recommendations by a Selection Committee, composed of one representative from each of the following: New York University; the Board of Directors, Greater New York Safety Council; the Metropolitan Chapter, American Society of Safety Engineers; the Commercial Vehicle Section, G.N.Y.S.C.; and the Metropolitan Life Insurance Company.

For information concerning these awards write Dr. Walter A. Cutter, Center for Safety Education, New York University, Washington Square, New York.

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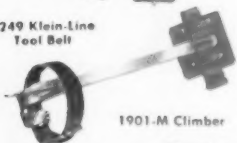
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ASK YOUR SUPPLIER

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If you have not received a copy of the new Klein Pocket Tool Guide, write for one. It will be sent without obligation.



Safety—Jet Propelled

—From page 19

illustrated booklet prepared by N.A.A. It's a booklet well calculated to sell safety to the new man. The fact that it is handed to the new man by the safety committeeman provides an excellent opportunity to discuss the specific hazards of the area and work of each new employee.

North American has also prepared an off-the-job safety booklet which is one of the best things I have seen yet. It's a memo book for telephone numbers most frequently used. Taken into the home it provides some safety tips on each left hand page opposite the most used telephone numbers which will be written in. The safety tips are alphabetized in an interesting way to tie in with the alphabetical tabs on the right hand pages of the directory. After you dial the number, and while you are waiting for your party to answer, you have a few seconds to glance over the printed material on the left hand page. Since the booklet will probably be used for quite a while, a tremendous number of safety impacts ought to result from every book distributed.

The telephone directory idea looked so good that the Council is currently working on a similar booklet for general distribution to the membership.

Although North American's frequency and severity rates for 1952 were approaching rock bottom, the company is going to try an expanded educational program to see if the rates can't be still further reduced, and at the same time build even better employee relations. One aspect of the new campaign will be the distribution of one of the National Safety Council's booklets each month. The booklets on job safety will be distributed in alternate months through supervisors. In the other months booklets on off-the-job safety will be mailed direct to the home with a North American letter of friendly transmittal. Almost a quarter of a million Safety Instruction Cards will be used to pinpoint specific hazards. Supervisors will regularly receive the successive pamphlets in the Coun-



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cil's Safety in Foremanship Series, and these pamphlets will be discussed in monthly supervisory meetings. Other, company prepared, publications are to be used, too.

My hat was off to N.A.A.'s Safety Department on still another count—they've designed an adaptation of the Green Cross and their own trademark with the slogan "Be a Good NAAbor." That little slogan ought to have plenty of industrial relations value!

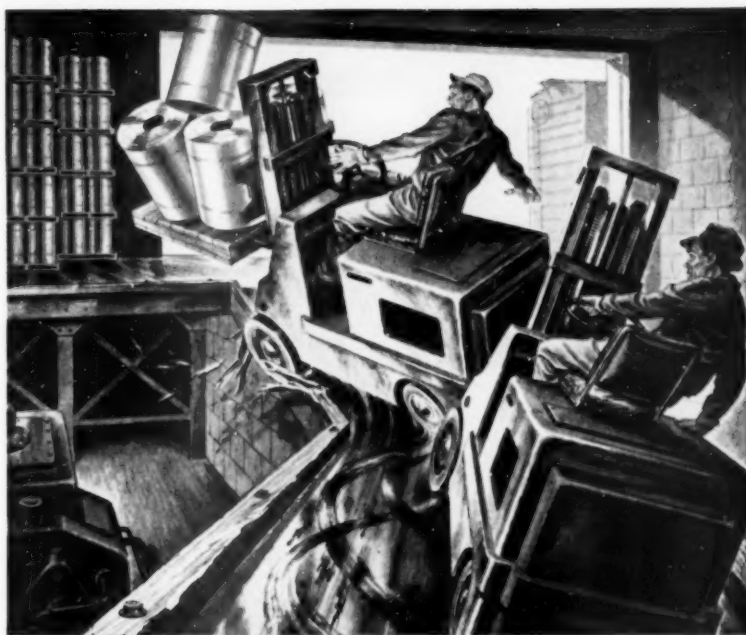
We were on rather unusual ground, at least for me, in talking about some of the specific hazards of jet aircraft operation. Naturally, N.A.A. insists that man-hours and injury experience of test pilots be included in the company accident experience. Since every plane has to have four hours of flight test by the company, which includes firing all of its armament, the potential from the standpoint of the safety record is considerable.

Wilkins explained, "The test pilots are of the highest competence and experience, but they are still human beings."

I was interested in the fact that our discussion again drifted back to the old reliable—"Supervision." Again good supervision is responsible for the excellent record of the company's test pilots.

As we went out on the apron where a row of sleek Jets were being inspected, Wilkins told me that North American had what it believed to be the first fatality caused by the tremendous suction of a jet intake. He said they had given considerable thought to the problems of what would happen if a hand tool, for example, was taken into the intake and thence into the turbine. They simply hadn't thought about the possibility of a man being drawn into the intake. However, and typical of good safety work, the tragedy of the first fatality led to development of barriers which keep people a safe distance away from the intake while the plane is being ground checked. So North American's first fatality of this type is its only fatality of the type.

In my first trip through an aircraft manufacturing plant, I was struck by the fact that aircraft



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In a large Eastern rolling mill, a ramp from the production floor to a storage area above was so slippery from oil and grease drippings that a fork-lift truck could not climb the incline by itself. An unloaded fork-lift truck had to push the loaded one. Already a safety hazard, the slippery ramp also caused production inefficiency.

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At your request, an Alan Wood Steel Company safety engineer will call on you to show you how ALGRIP can be profitably used in your plant to lower insurance rates, raise production, and eliminate accidents.

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Offices in principal cities...Consult your telephone directory

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EMPLOYERS MUTUAL FIRE INSURANCE COMPANY

production compounds the many problems of machine shop and metals manufacturing, as well as electrical equipment manufacturing, multiplied by problems similar to those of the construction industry. Then, the whole operation moves at a pace which is almost, but not quite, mass production, so you can't fully utilize the safety which can be standardized into a mass production routine. In a situation with these varied elements, and with objectives of both highest quality and maximum safety, it's smart to drop back and rely on sound management principles to guide you through to your goal. That's what North American has done—in production and safety.

Du Pont Rayon Plant Tops Industrial Safety Records

THE DU PONT COMPANY'S Old Hickory rayon plant has set an unmatched record in industrial safety, with a total of 28,160,000 man-hours without a disabling injury and employees were still adding to the total on July 1.

Rolling up a record of more than four years without a time-losing injury, the plant established a new world's safety record for the second time in its 27-year history. The plant's first mark was set in 1937 when it completed over 11,000,000 exposure hours without a major injury. It began that record in 1935.

The new achievement was marked by a ceremony for all employees at the plant with the accomplishment being officially recognized by the National Safety Council. Crawford H. Greenewalt, president of the Du Pont Company, and officials of the company's Textile Fibers Department attended the ceremony.

F. Murray Acker, manager of the rayon plant, told 3,500 employees what their record meant in terms of real accident prevention. He said from June 26, 1949, when the present record started, to June 27, 1953—a period of 1,463 days—the plant kept 306 major injuries from occurring.

"Our records show 306 major injuries would have been caused," Mr. Acker said, "if this plant had made no improvement in the acci-

dent prevention program of the early years of operation."

Mr. Greenwalt, lauding the accomplishment of the men and women of Old Hickory, said:

"You men and women have demonstrated that it is possible to work without any lost-time injury whatever. You have been doing it for more than four years. If all the Du Pont Company could do likewise, if the chemical industry and all other industries could match your achievement, the saving in distress, in suffering, and even in death would be beyond price."

Ned H. Dearborn, president of the National Safety Council, personally presented the Council's Award of Honor to the plant in recognition of its record-breaking achievement.

The new record for Du Pont's Old Hickory rayon plant surpasses the former record of 28,132,583 accident-free exposure hours set by another Du Pont textile fibers plant at Martinsville, Va.

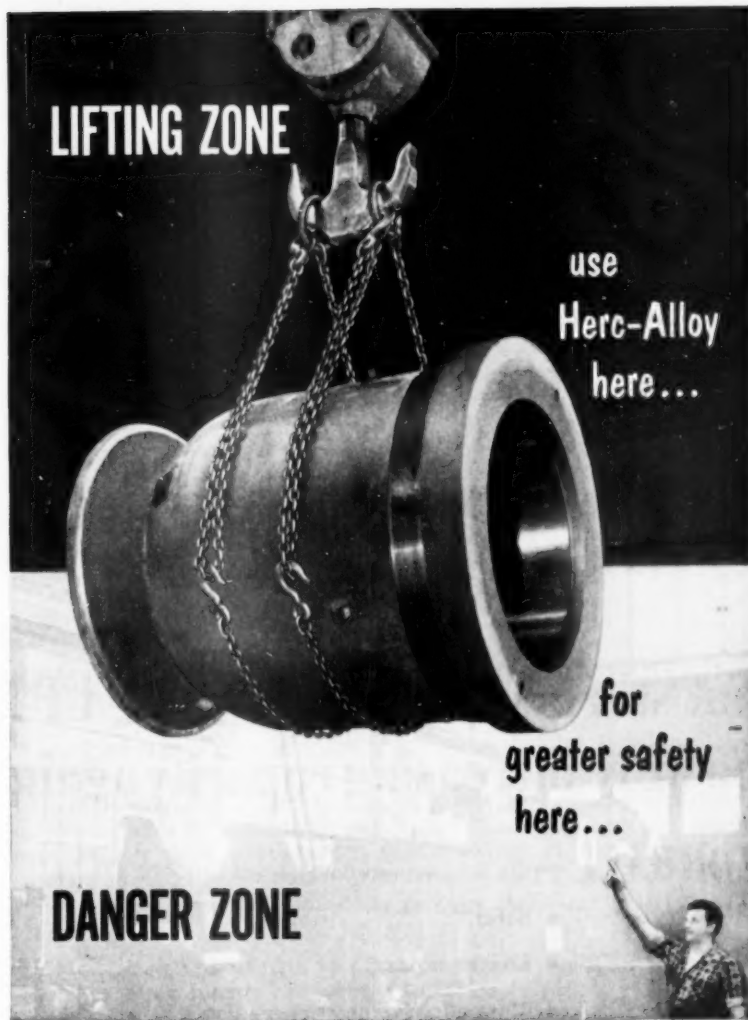
N.Y. University Announces Fall Courses

NEW YORK UNIVERSITY's Center for Safety Education will conduct an evening program in industrial and traffic-accident prevention training, beginning September 21, 1953.

Students enrolled for a full curriculum of 11 courses are eligible to fulfill requirements for a Certificate in Industrial Safety or a Certificate in Traffic Safety. Students may elect additional courses in fields of special interest.

Courses to be offered in the fall term are: Accident Prevention—Its Background, Objectives and Relationships; The Philosophy and Basic Principles of Accident Prevention; Industrial Hazards—Mechanical and Personal Control Methods; Inspection for Fire Prevention and Protection; Organization of Fleet Safety Programs; Vision in Industrial Safety and Motor Vehicle Operations; Effective Speaking in Accident Prevention and Principles of Safety Inspection.

In addition special courses designed for particular groups will be offered. These special courses



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Hundreds of plants like the one shown above* are using Herc-Alloy Sling Chains. Greater safety is their big reason for doing it. But there are other factors too. Herc-Alloy is economical because of its long service life. Then too, the use of alloy steel permits a weight reduction that helps prevent worker fatigue. These advantages are worth thinking about. Those who do consider them seriously generally adopt safe Herc-Alloy Sling Chains for their plants.

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will include: Marine Accident Prevention; Hotel Accident Prevention; Accident Prevention for Small Firms and Hospital Accident Prevention.

Information concerning these or other courses and activities may be obtained by writing the Center for Safety Education, New York University, Washington Square, New York 3.

Amyl Acetate

—From page 31

Precautions should be taken to prevent the accumulation of static electricity.

17. CO₂ foam, or dry chemical extinguishers should be used to put out amyl acetate fires. Fog nozzles and sprinkler heads may be useful.

Protective Equipment

18. Eye protection, in the form of vapor-proof goggles, should be provided when necessary. Direct contact with the skin should be avoided. Rubber gloves and aprons should be used when there is a chance of contact with the liquid. Respiratory protection can be provided by chemical cartridge respirators or gas masks equipped with filters for organic vapors, if they are used within their limitations.

First Aid

19. Persons exposed to excessive vapor concentrations should be removed to fresh air and made to lie down. Effects due to inhalation will usually dissipate within two to three hours.

20. In case of severe exposure a physician should be summoned. In such cases oxygen should be given.

Waste Disposal

21. Waste amyl acetate may be disposed of by burning on a protected burning ground or dump. It should be placed in a shallow pit lined with clay or other impermeable, non-combustible materials and surrounded by a band of non-combustible material. The pit should be ignited from a remote place, most conveniently by a train of excelsior.

22. Waste solvents should not be emptied onto a general dump or left on the dump in drums. A number of serious accidents have stemmed from this practice.

Acknowledgement

The first draft of this Data Sheet was prepared by J. E. C. Valentin, Bakelite Division, Union Carbide and Carbon Company. It has been reviewed by the Safe Practices Conference Committee of the Council's Industrial Conference and approved for publication by the Industrial Conference.

Obituary

DAN O. MASON

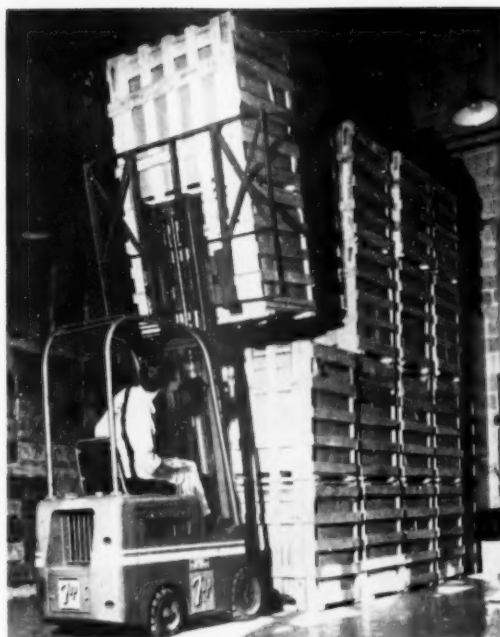
DAN O. MASON, Safety Manager of General Chemical Division, Allied Chemical & Dye Corp., New York City, died June 11 at St. Peter's Hospital, New Brunswick, N.J.

Mr. Mason, who was 61, had not been well for several months and was hospitalized two weeks ago. He is survived by his wife, Elizabeth, daughter, Maud, 24, and sons John, 27, and Dan, 17. His home was at 112 South Second Avenue, Highland Park, New Brunswick, N.J.

Funeral services were held June 15th at the Highland Park Reformed Church, Highland Park.

Mr. Mason was widely known throughout the chemical industry and had spent his entire career with General Chemical, joining the company in 1920, at Cleveland, Ohio. He became Superintendent of General's East St. Louis, Ill., Works in 1925, a position which he held until his appointment as assistant works manager of the company in 1929. From that date until the 1940's, he served successively as assistant works manager, director of operations, and works manager. In recent years, he had directed the company's safety program and had been active in employee relations functions.

Mr. Mason also participated in industry-wide safety activities, serving as a member of the General Safety Committee of the Manufacturing Chemists' Associa-



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ACCIDENTS COST MONEY! According to the National Safety Council, the direct cost of industrial accidents in 1948 was nearly 1½ billion dollars—and 22% of all disabling industrial injuries occurred to employees who were handling materials. These figures do not include such indirect costs as production slow-down, or the training of new workers to replace the injured. The tremendous cost of materials handling accidents is a dollar-and-cents problem that faces every plant in America.

Three factors determine safe handling: safe handling equipment, a safe handling system, and safety-trained employees.

For safe equipment, more and more leading industries have come to CLARK; a generous safety factor is an integral part of the design and construction of every CLARK machine. For assistance in planning safe, efficient handling systems, more and more alert business men have called on their CLARK dealers. And in teaching the rules of safe driving to their industrial truck operators, many companies are using CLARK's new safety-training movie, "Safety Saves."

CLARK's new 25-minute sound movie shows on-the-job examples of good and bad driving practices. Everyone with a stake in industrial safety should see it—for truck operators, it will pay dividends in accident reduction, less damage to goods. "Safety Saves" is available on a loan basis. Simply write for it and indicate when you want it, but give alternate dates too.

Let your CLARK dealer show you how to build a modern handling system around CLARK trucks. You'll cut costs, cut accidents. Handle safely, with CLARK equipment.

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tion, and the Engineering Committee of the National Safety Council.

Mr. Mason was a native New Englander. He was born in Glover, Vermont, and graduated from Middlebury College in 1917. He returned there as an instructor in chemistry for one year, following 24 months in the Corps of Chemical Warfare during the First World War.

WALTER A. CHOWEN

WALTER A. CHOWEN, retired manager of the California State Rating Inspection Bureau, died at his home on July 3 after a long illness. A resident of Berkeley, Calif., Mr. Chowen was 36.

He first entered the insurance business after graduating from the University of Minnesota in 1891. In 1906 he began a nine-year tenure of service with the San Francisco office of Aetna Insurance Company. In 1915 Mr. Chowen became manager of the Rating Inspection Bureau, a position he held until his retirement in 1936.

He established the California Safety Society, which is now the San Francisco Chapter of the American Society of Safety Engineers.

Mr. Chowen is survived by his widow, Gertrude, and two grandsons, Lester and David.

WILLIAM E. WORTH

WILLIAM E. WORTH, former executive vice-president of International Harvester Company and a pioneer in industrial safety work, died June 24 at his farm home near Rolling Prairie, Ind. He was 72 years old.

From 1917 to 1923 and from 1933 to 1940, Mr. Worth was a director of the National Safety Council. He was a vice-president from 1919-21, secretary and treasurer from 1921-22, and vice-president and treasurer from 1933-37.

Born in Manchester, England, he came to America with his parents, at the age of seven. At 14 he went to work for the Pullman Company as office boy. Five years later he quit to spend a year at business college. Subsequently he was employed by the Belt Railroad of Chicago and in 1917 he went

with the Chicago Tunnel Company which had started an active safety program.

In 1920 he entered the Harvester organization as assistant manager of the industrial relations department, where he played a prominent part in development of the company's safety program. Two years later he was appointed superintendent of the 31st Street Works. In 1927 he was promoted to assistant manager of works and subsequently to works manager in charge of twine products, and to executive vice-president, the position he held until his retirement in May 1947.

Mr. Worth is survived by his widow, Mary; and three daughters: Mrs. Marion Johnson, of Durban, South Africa, Mrs. Helen C. Wares, of Barrington, Ill., and Mrs. Louise Anderson of Rohing Prairie. Also surviving are a sister, a brother, and eight grandchildren.

Xylene and Toluene

—From page 39

is advisable for all persons exposed to the vapors of these two solvents.

17. Both the narcotic effect and the effects of xylene and toluene upon the blood system are aggravated if the exposed person uses alcohol in large quantities. The reaction is further increased if the exposed person has anemia, heart or lung diseases, or kidney or liver trouble. Men with such conditions should not be allowed to work where they are likely to be exposed to either of these solvents.

18. In addition to the narcotic effects of these two solvents, they can produce serious dermatitis. Since xylene is the more powerful degreasing agent, its action on the skin is more potent and serious dermatitis is more likely from direct contact with xylene in either the liquid or vapor form than from contact with toluene.

19. The American Standards Association has set 200 parts per million as the maximum allowable concentration for exposures not to exceed 8 hours daily. This con-

There's a Pyrene for every fire hazard



These extinguishers are for oil bath hazards: (L to R) Pyrene Foam, C-O-Two Dry Chemical and C-O-Two Carbon Dioxide Extinguishers.

is your fire protection up to date and ample?

Common sense dictates enough of the right kind of fire protection. If you haven't had the danger spots in your plant surveyed recently, we suggest inviting a Pyrene distributor to make a tour. He has the right Pyrene* equipment to cope with any fire hazard you may have—everything from hand extinguishers to automatic systems. He also carries Pyrene parts and recharges. One call to him, one purchase order, one invoice will take care of any need you may have. Write us for his address.

*T.M. Reg. U.S. Pat. Off.

Portable fire extinguishers: vaporizing liquid, soda-acid, foam cartridge-operated, carbon dioxide, dry chemical, and pump tank • **Wheeled extinguishers:** soda-acid, foam, carbon dioxide, dry chemical types • **Air foam playpipes** • **Systems** for special hazards



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Affiliated with C-O-Two Fire Equipment Co.

centration has not been shown to produce any permanent effects, but Von Oettingen *et al* showed in an experimental study on human beings that symptoms of fatigue, confusion, weakness, abnormal sense of touch, headache, nausea, and impaired accommodation to light occurred regularly after exposure to this concentration of toluene. At this concentration (200 ppm) xylene may cause severe eye irritation. Some states have made the maximum allow-

able concentration for an 8-hour exposure as low as 35 parts per million for both xylene and toluene.

20. First aid for acute toluene or xylene poisoning is relatively simple. A person showing signs of the poisoning should be removed immediately to fresh air and kept warm and quiet. If breathing has stopped, artificial respiration (arm-lift back-pressure method) should be commenced

immediately and oxygen administered if it is available. Otherwise no further treatment is indicated. The poisons are rapidly eliminated from the system. Persons showing signs of chronic poisoning will be picked up in the periodic medical inspection and will then be in the hands of proper medical people.

Personal Protection

21. Strong positive ventilation is the best method for reducing the hazards from xylene and toluene.

22. Exhaust systems should be designed as an integral part of process equipment. Most processes which use xylene and toluene can be designed to permit the complete recovery of the used solvents. In this way, only in an emergency do xylene or toluene become atmospheric contaminants and danger to personnel is considerably lessened.

23. Workers who are likely to come into contact with liquid xylene or toluene should be provided with aprons, boots, and gloves of neoprene to minimize skin contact and should have face shields or goggles available.

24. Men who must work in xylene or toluene contaminated atmospheres of concentrations from 200 parts per million to 20,000 parts per million (.02-2.0 per cent) should be provided with a United States Bureau of Mines approved gas mask with full face-piece (to prevent eye irritation) and a black organic vapor canister. Workers who must enter atmospheres of unknown concentration or concentrations in excess of 2 per cent should be provided with Bureau of Mines approved supplied air respirators or self contained breathing apparatus.

Detection

25. There are several methods by which atmospheric concentrations of xylene and toluene can be determined. Perhaps the most effective means is by use of a benzol indicator calibrated specifically for toluene or xylene. There are several combustible-gas-indicators of the benzol type on the market which can readily be converted to detect toluene or xylene.

Work Peril?

don't risk it—

Miller it!

Unexcelled for safety and flexibility, Miller equipment is real assurance against work hazards. Miller safety products are designed, manufactured and tested with careful attention given to the importance of comfort, safety, service and economy. Remember—don't risk it—insist on Miller.

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26. There are small hand-operated detectors available which utilize formaldehyde-sulfuric acid impregnated silica gel. These together with the apparatus mentioned above are quite reliable in measuring the atmospheric concentrations of a single contaminant. Where mixtures of xylene and toluene alone or with benzene may be present they cannot give a reliable determination.

27. When concentrations of mixtures of xylene and toluene are to be determined, one of the nitrating methods should be used. In these, vapor is first collected and reacted with nitric acid. The resulting compounds are then analyzed optically or chemically to determine the concentration.

Acknowledgement

The first draft of this data sheet was prepared by Rex H. Wilson M.D., Medical Director of The B. F. Goodrich Co., Akron, Ohio. It has been reviewed by The Safe Practices Conferences Committee and approved for publication by the Council's Industrial Conference. Illustrations were furnished by the Industrial Safety Equipment Association.

Air Force Reduces Ground Accident Cost

COST of ground accidents within the Eighteenth Air Force during the first six months of 1953 shows a reduction of more than \$205,000 under the cost for the same period of last year.

According to Gene Newman, director of ground safety for the Eighteenth Air Force, with headquarters at Donaldson Air Force Base, S. C., ground accidents for the first half of this year cost the government \$495,413. In contrast, the cost of ground accidents within the command for the first six months of 1952 totaled \$701,308; a reduction of \$205,895.

The figures were computed on a basis of deaths, permanent and partial injuries and necessary first-aid treatment. The major cause of ground accidents is off-duty crashes of privately owned automobiles. Other important causes are drowning and swimming injuries, altercations, athletics and property damage.



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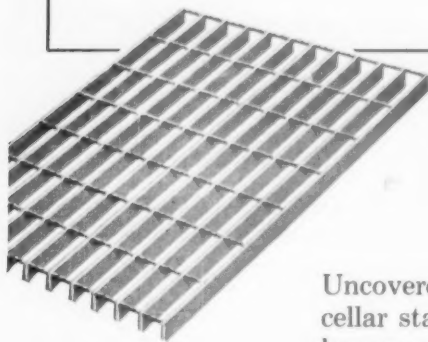
Sling Size	% Savings
5/16" x 10'	33.0%
1/2" x 10'	23.6%
1/2" x 20'	17.2%
3/8" x 8'	22.3%
1/4" x 5'	15.5%
3/16" x 8'	13.0%
3/32" x 10'	8.5%

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THE READERS'
POINT OF VIEW



Comments on topics of current interest are invited. They need not agree with the editors' opinions.

Disagrees with Doctor

GULFPORT, MISS.—The June NATIONAL SAFETY NEWS contained an article by Henry S. Brown, M.D., entitled *Treatment of Low Voltage Injuries*. In this article Dr. Brown states, "Artificial respiration must be kept up for hours, if need be, until rigor mortis or post mortem lividity begins to occur, unless the victim is pronounced dead by a physician."

There must be hundreds of people in the United States alone who have been revived by artificial respiration after they had been pronounced dead by a physician. It has been our experience and, I am sure, the experience of others who have suffered electrical contact cases in their companies that the doctor almost invariably pronounces the victim dead soon after he reaches the scene, regardless of the length of time involved.

This company, and I am sure most electric utility companies, requires that artificial respiration be continued until the victim is either revived or rigor mortis has set in. In most cases, this will require at least three or four hours.

DON McCULLOCH
 Safety Supervisor
 Mississippi Power Co.

The Three E's

RAY, ARIZ.—With all due respect to Mr. Zeskey's careful analysis of one of safety's major problems, I feel his subject matter warrants closer scrutiny. Such examination could take two directions:

1. Are his observations accurate? Were they made with the same kind of objectivity with which he would observe a roller table trial?

2. What are the engineering solutions to the millions of non-repetitive jobs found outside manufacturing industries, such as construction, mining and lumbering?

I doubt seriously that Mr. Zeskey
National Safety News, August, 1953

key attempted to correlate accident prevention progress with safety engineering or with safety selling publications. I doubt further that an engineer's logic could be found in the following:

We have had a dearth of safety engineers . . . We have had much human engineering in safety . . . We have made tremendous progress in accident prevention . . . Human engineering does not pay off in accident prevention.

Actually, it has taken a good healthy measure of both human engineering and design engineering to bring about our progress to date.

Mr. Zeskey's criticism that education and enforcement are being substituted for simple engineering is more than likely valid in cases where initial engineering would not seriously consider safety, or where the safety engineer was lacking in simple engineering skills.

Some mention should be made of his inexcusable generality that human engineering is "a word pseudo-psychologists use who don't like to be called school teachers or policemen but who aren't either engineers or psychologists."

To point out the ridiculousness of such generalities, I offer the following: Roller table transportation is a technique pseudo engineers use who don't like to be called tool designers or time and motion study men, but who aren't either engineers or psychologists.

I would like to see as much safety as possible and practical designed in new machines. By practical I mean with a view toward preventing human suffering and future compensation bills as well as maintaining production rates. Unfortunately, the selection and design of new equipment for years has been left in the hands of the chief engineer, for whom safety features are afterthoughts.

Rarely in the mining industry are safety engineers, real or pseudo, consulted about new equipment. The safety engineer cannot design much safety into the machine once it is built and in operation. He can muzzle this machine to the best of his ability but after an inherently unsafe operation has begun and the machine's

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roots are deep in concrete upon which it rests, little more can be done in real engineering.

What is left for him to do? The people who operate the machine are left. Their behavior, fortunately, is dynamic. It is not bolted to the floor, and through human engineering the safety engineer must do the best he can.

The point Mr. Zeskey is driving at has been obvious to many safety engineers for a long time. However, as long as top management and chief engineers thwart all attempts to inject safe design into our equipment, education and enforcement will be necessary. Furthermore, they will continue to be necessary in all non-repetitive tasks performed by men in servicing and maintenance work.

J. A. LEE

AIKEN, S. C.

A recent issue of the NATIONAL SAFETY NEWS contained an article entitled "I'm Sick of the 3 E's!" which I am sure was read with interest by many safety engineers like me. I feel compelled to express my views and show that the author's entire thinking is completely alien to basic accident prevention principles.

The only statement in the entire article with which I agree is, "We're not engineers." Indeed we are not engineers! Certainly we are all agreed that an engineering background is desirable in the potential safety engineer. However, is engineering and physical plant the whole story? Obviously not, for if this were so, we could correct all physical hazards and solve our accident problem. Heinrich tells us that 88 per cent of all industrial accidents are caused by the unsafe acts of persons.

Gentlemen, show me a person that can be engineered and I'll eat my copy of *Industrial Accident Prevention*. Show me a slide rule that will solve the human equation and I'll eat that too. We must adjust our thinking and direct our efforts to cope with the problem at hand. That is the education, training, and the selling of the idea to individuals that the Good Lord takes care of he who takes care of himself. It is through an alert, informed and thoroughly sold working force that a success-

ful accident prevention program will evolve.

Let's stop tilting at this "engineering" windmill and get down to work. We are personnel managers, human relations men, salesmen or what have you, but the Safety Engineer that is spending 90 per cent or even 5 per cent of his time coping with only 12 per cent of our accident prevention problem is misdirecting his effort.

I would be foolish indeed to stand on the premise that there is a single solution to a problem of such wide scope as accident prevention. It is a myopic view to state that success lies wholly in either engineering, personnel work or any one line of attack. It is for this very reason that the "3 E's" exist.

I have seen the "3 E's" do what was said to be impossible and that is to hold an accident frequency for construction work below "1." That it is practical, that it is feasible, and that it will work, is evidenced by many examples, and is fact.

I'm not sick of the "3 E's." I've seen them save lives and Thank God for that. What I am sick to heart of is that we do not have enough safety engineers that will get off their big fat "Engineer's Ego," and make accident prevention a living, dynamic and working tool of industry.

JOHN E. BROWNING
Safety Engineer

PHILADELPHIA, PA.—

It was refreshing to read the article, "I'm Sick of the 3 E's," published in your May issue. It is believed that more material along this line may be helpful to the safety engineering profession in general.

The undersigned has conducted his activities in a plant of around 11,000 employees, along comparable lines for several years, and has achieved an accident rate less than half the national average for comparable exposures.

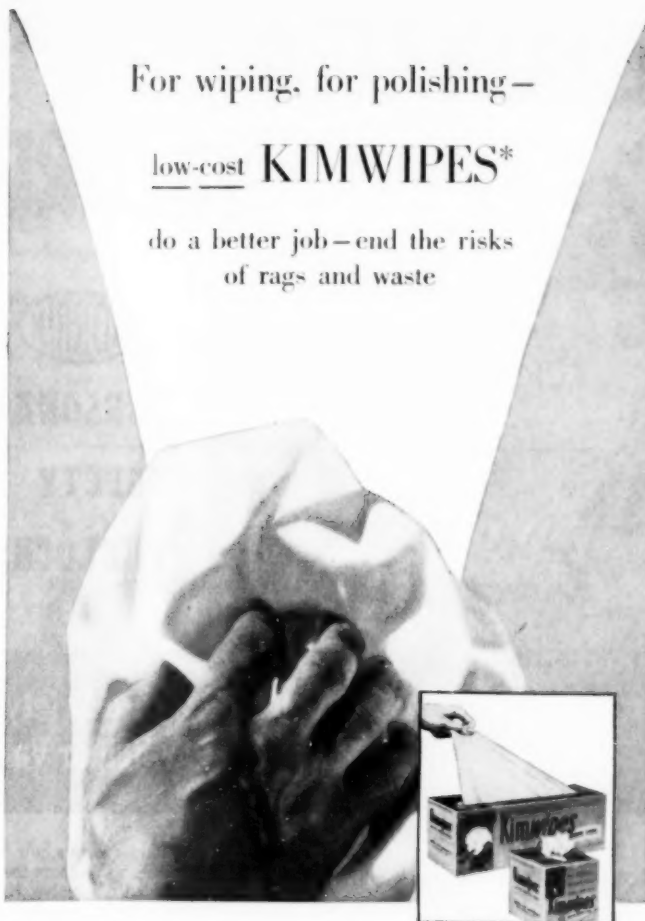
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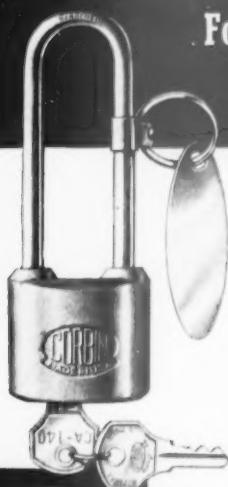
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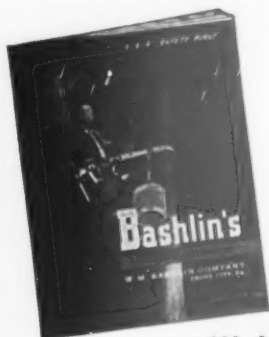
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Personals

—From page 62

M. J. McCARTHY, for many years safety director for Fisher Body Division, General Motors Corp., has been appointed consultant in industrial safety for Columbus McKinnon Chain Corp., Tonawanda, N. Y. Mr. McCarthy was active in the Automotive and Machine Shop Section of the National Safety Council, serving as general chairman 1933-34.

Measuring Performance

—From page 37

during accident periods. This does not mean that production must be constant, without variation. Rather, that the deviations from average production levels must not exceed that attributable to chance fluctuations in the production process. The statistical control chart provides this information. Thus, when we use the safety per cent effectiveness measure proposed, we must use it in connection with a control chart for number of acceptable units produced.

Measuring tools are used according to their sensitivity and the requirements of the job at hand. For rough measurements we wouldn't think of using a micrometer. This safety measure is not designed for high levels of accident incidence. For these cases frequency and severity rates are adequate. Safety per cent effectiveness does not replace frequency and severity rates. It supplements them.

No Gory Details

First of all, we get an understanding of what is taking place in the group during an accident period. This helps in supervising the group. Playing down an accident and urging the group to high productivity to make up for lost production may often only extend the recovery period. We can appreciate the need for giving prompt and factual—not detailed and gory—reports to the employees on accidents. The benefits to be derived from proper handling of accident situations are ours.

As a basis for further develop-

ment, the concept outlined here offers hope of our being able to make predictions of the total productivity loss and the length of time before recovery has been effected. This would be of tremendous value in production control operations. While not today possible on a formal basis, such predictions are regularly made on the basis of past experience.

The accident reaction curve provides the clue for rational planning of safety programs.

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Young Engineers

—From page 21

Due to injuries resulting from industrial processes it can be expected that at any one time 200,000 workers will be idle—nursing injuries. This is a tremendous and extravagant waste in addition to the loss of skill from production. Experience further shows indirect expense of accidents is

approximately four times the direct costs.

Bureau of Labor Standards records show 70 per cent of all accidents occur in plants where no safety programs are in effect. This is a tribute to the area where there are safety programs. Recently, bookkeeping and record keeping procedures have undergone important and significant changes. A few years ago insurance records and claims settlements were handled as necessary

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evils in their own right with little connection to over-all costs of running the business. Profits and losses were apart from insurance and claims and based strictly on construction, maintenance and operating expenses.

Higher pay and increased benefits to disability and welfare funds have brought about programs for health and safety to decrease absenteeism. Unemployment insurance is based on turnover experience and creates the necessity for improved employee relations to retain engaged employees. Since most firms are covered for accidents by insurance, expense of premiums varies also with accident experience and it is just good business to save a dollar when you can.

For instance, one company saved \$90,000 in premiums over a five-year period. By reducing the accident frequency rate with a safety program the rate dropped from 51 cents to 12½ cents per \$100 of payroll. This is a substantial saving. In addition, pain and suffering were spared many employees.

Another company in the construction field with a 3½ million dollar payroll can save \$143,500 in insurance premiums with a rigid safety program. In general, it is calculated you can save \$4 for every dollar spent on a safety program.

As regards unemployment insurance, the rate varies from 2.7 per cent to .3 per cent of annual payroll and on a \$600,000 payroll could be reduced from the maximum of \$16,200 to \$1,800 for a saving of \$14,400. Many times labor turnover is affected by the accident rate of a plant and cannot be ignored as a factor in economy.

These are significant considerations and when an engineer has the responsibility to run a plant economically, he is automatically charged with the foresight to prevent accidents—an unpredictable and possibly unlimited expense.

In regard to solicitude for your fellow man, it goes without saying that among civilized and free people it is characteristic. You would be callous indeed if you were not deeply shaken by the

grief of the family when the news is broken regarding a loved one. Carrying such news is not one of the coveted privileges of management. If you did it once, you would be an inspired safety adherent forever.

Many factors affect a safety program; some are not always obvious. Some sociological features have varied significance. Incentive pay frequently causes increased exposure to accidents. Guards will be removed, precautions winked at to make a buck. Sometimes it can be done; sometimes it can't. The annual wage, a current topic of conversation, has an overtone in accident experience. If it operates to make the worker feel more secure, he probably will be more careful as the result of a secure frame of mind. On the other hand, it might engender the "I don't have anything to worry about now" attitude and in this frivolous state make him accident prone. What the effect will be is hard to calculate, but there will be a reaction.

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National Safety News, August, 1953

Awards are high today as the result of accident claims. As an example, \$111,698 was recently awarded to the widow of a milkman who entered an unmarked door and fell to his death down an elevator shaft. It will take many bottles of milk to clear this account. And what about his family?

Any figures presented here would seriously dislocate any economic advantages of engineering calculations from design and construction efficiencies. So, the engineer who is overlooking his responsibilities to safety is sadly out of step.

Accidents are recognized as being symptoms of inefficiency—something wrong in the operation, some fault in design or some inadequacy in operating procedures such as supervision or training. If that is admitted, where do we seek a solution? The answer is safety engineering.

Safety is a wide field and encompasses many phases of industrial activity. It would take hours to cover the field of safety equip-

ment alone. I suggest you obtain the most recent Equipment Number of the NATIONAL SAFETY NEWS, check the list of Safety Standards produced by the American Standards Association and codes and authorities for safety in your own state, and attend a safety convention and exposition to see the extent.

The field is extensive; what about safety personnel? That is a heterogeneous band of variedly trained insurance, industrial and government representatives. Backgrounds run the gamut from job experience to doctors' degrees. Currently, there are no accepted courses running to degree of safety engineer, who is usually a product of his own firm's experience and special training. As the result of collaboration in recent years, it was agreed that best interests would be served if courses associated with safety were integrated with regular college engineering courses in upper college grades. Generally, a safety engineer is a graduate engineer with safety experience in his line or firm. Titles in the field run from safety inspector to safety director and the responsibility varies in many respects. But these safety experts know people and they know from experience what can be expected.

Foresight that an engineer needs to compensate for his own blind spot in this field is enough sense and good judgment to know he should consult with the safety engineer just as he would any other specialist when calculating on a job. The safety engineer will be a big help.

How can he help? In many ways. Line and staff arguments involving respective responsibilities are frequent in industry and the safety engineer occupies an unusual status. Sometimes line and sometimes staff, he operates toward the same end result—keeping accident frequency down. Some have referred to his role as that of catalyst—bringing about effective, harmonious cooperation of line and staff for the general best interest.

Effective planning means fewer costly changes in the finished structure. If these changes are the

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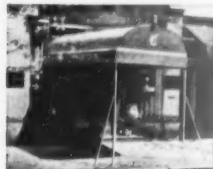
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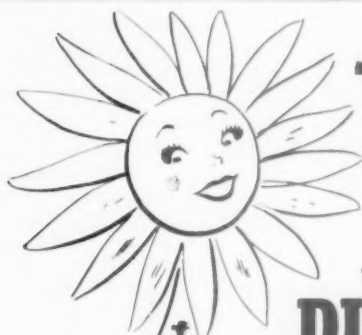


*Manufactured under Patents Nos. 2,044,176 and 2,299,612 others pending.

Philadelphia Textile Finishers, Inc.

114 LAFAYETTE ST.

NORRISTOWN, PA.



Be Fresh... Stay Fresh

wear a DUPOR No. 24

the Respirator that is U.S.B. of M. Approved for Type A Dusts

More than 24 sq. in. twin filter area. Sanitary face cloth. Soft rubber face mask. Has all patented DUPOR features. Greater visibility . . . no blind spots! Can be worn with goggles or glasses.

Sample \$300 sent *pp*

H. S. Cover Fog-Proof, Gas-Tight Goggles for use with above respirator...\$2.00 pp.

H. S. COVER, South Bend, Ind.

results of accidents, they are excessively costly in addition to the insurance rates and claims as discussed above.

A safety engineer's work just begins at the blueprint stage. His greatest value to a plant is realized in the day-to-day operations. Accident prevention on this basis is a highly complex and exacting activity compounded by the unpredictable ingredient — human nature. Only one who has had extensive experience with people in association with mechanical contrivances can realize possible inexplicable circumstances which this association can produce. An expert opinion is that it is easier to correct the machine, not the person who runs it, if you want to avoid an accident.

Consequently, endless hours have gone into guard design and protective procedures to keep humans and machines separated as much as possible and still get production. Many hours are spent in educational and training programs for employees and supervision. The question is invariably raised: Doesn't emphasis on safety adversely affect production? As an over-all end result, the answer must be "no." Records show that if a plant is having a decreasing accident rate it is 11 times more likely to be efficient than a plant with an increasing rate.

A general statement by a head of a large corporation is of interest. He said, "Better working conditions mean a better mental attitude of the worker and, therefore, better work."

Whether or not a plant is regarded as a safe place to work soon gets around the labor market, and a plant with a bad reputation finds it difficult to hire and keep good workers. This is only one phase of the difficulty because it will show itself in the operating problems of the business in many ways. These include higher wages than other comparable plants and higher insurance premiums in addition to liens already in effect from claims on previous accidents. Effects of accidents on plant operation cannot be overlooked and it is wise engineering planning and administration that give serious consideration to its many aspects.

A recent ad says the engineer wearing bifocals brings wisdom of maturity to the planning table to temper energetic and ambitious youth. You might say a necessary tool for a good engineer would be trifocals, which permit him to see one objective in 3D perspective, his responsibilities to dollar-control, life-saving, and production. That is the job of the engineer—to focus his abilities on the target of successful plant operation.

We operate in our country on a principle of checks and balances. In this work there is no exception. If you think you can cut a corner and gamble with a calculated risk, you had better consider the extent of interlocking interests. For a number of years local and state governments have had codes and authorities which control many activities concerned with industrial operations.

There is the American Standards Association, which attempts to collaborate in standardizing codes; the National Safety Council and local Safety Councils, collaborating in promoting safety thinking; the American Society of Safety Engineers with representatives in insurance companies and industries, striving to watch and promote safety ideals; and the Association of Casualty and Surety Companies, which provide expert service to their clients to reduce accidents and therefore insurance costs. Also, you have state and national Labor Departments.

The fact that approximately 100,000 persons are accidentally killed annually in the United States brought forth national attention in the form of the President's Safety Conference, which has met annually since 1945. Members of the conference were told substantial correction must be made within industry in a few years or steps would be taken to legislate corrective procedures. While off-duty accidents occur almost 10 to 1 to on-duty accidents, in-plant safety promotion usually carries home the effect.

Today the human being is a guinea pig for everybody. Medical science tries all sorts of wonder drugs on him, the drug store tries all sorts of vitamins on him and the top conversation today is



I KNOW I'M SAFE...

with WOODEN SOLES!

Wooden Soles Insulate
Strong steel toe

FOR THE FACTORY...

No. 504-S Sizes—5-13

Wear a Reece "Strong Toe." Comfortable leather uppers. High, roomy steel toe protector, heat-resistant wooden sole. Have comfort-safe feet at work in oil refineries, foundries, steel mills, factories.




...FOR THE FOUNDRY

No. 300

The Reece "Hot Foot" sandals. Protect your feet in furnace and coke oven rooms. Straps on over your own shoes. Heat resistant wooden sole, strong galvanized iron counter, flexible hinge toe.

Sizes—Small—
Medium—Large

WRITE FOR CATALOG

There is no substitute for Reece Wooden soles

REECE WOODEN SOLE SHOE CO.

Dept. NSN 8 Columbus, Nebraska

GYRALITES

WARN FOR SAFETY...



Type 15100 Gyalite for low voltage duty. With rotating glass reflector.

with high intensity rotating light beams

The Gyalite projects a beam which rotates with a wide, circular sweeping action...every eye within range of danger sees and PIN-POINTS the safety hazard instantly!

Compact and reliable Gyalites solve your warning signal problem when noise levels are too high for sound signals or where multiplicity of sound signals would confuse. Gyalites install easily on overhead cranes and other hazardous moving equipment. Portable Gyalites protect ground crews at hazardous locations. Automatic control by time switch, pressure switch, float switch or electric eye will safeguard equipment and personnel in innumerable plant operations.

Write now for Bulletin No. 5015



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PYLET CONDUIT FITTINGS • FLOODLIGHTS • PLUGS & RECEPTACLES

King Wrong and Whitey



Yes! "Work clothes make your men safe!" Rent safe work clothes—the kind that combat occupational disease and accidents—from the Industrial Launderer nearest you. For a few hints on how to *Conquer King Wrong* write to the:

INSTITUTE OF INDUSTRIAL LAUNDERERS

1627 K Street, N. W.

Washington, D. C.

No. 200
Asbestos Gloves
Lined or unlined. Plain
or leather reinforced.
11, 14, 23" lengths.



For Safety Get Quality Asbestos Gloves

Only quality can put full safety into asbestos gloves. Steel-Grip asbestos safety gloves are quality throughout. The quality starts with the asbestos cloth... Underwriters' Grade 2½ lb. per square yard. You find quality in the design... seamless one piece construction from tip to top. No seams at wrist or working edges to pull out or burn just when protection is most needed on the job. Double sewn throughout. Full cut for cool, comfortable fit.

And the manufacture is of the quality that made Industrial Gloves Company the leader for 43 years. Gloves and mittens, both plain and leather reinforced, your choice of lined or unlined, made in standard lengths of 11", 14", and 23". Special lengths to your requirement. Knitted cotton lining, 8 ounce weight, is our standard lining. Knitted linings allow quick dissipation of heat. Special linings available. A complete line of asbestos safeguards for every job hazard. Tell us what you need. Catalog free.

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a corporation

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Danville, Ill.

(In Canada:
Safety Supply Co., Toronto)

Steel-Grip
INDUSTRIAL
Safety Apparel

TRADE-MARK
Demand this
Trade Mark

To be sure of the Genuine

No. 250
Asbestos Mitts
Reversible, worn
either hand giving
double service.
Lined or unlined.
11, 14, 23" lengths.



No. 225
Leather
Reinforced
Asbestos Gloves
Leather palm, fingers,
thumb. 11,
14, 23" lengths.

No. 280
Leather
Reinforced
Asbestos Mitts
Palm, back and
thumb, reinforced
with heat resistant
leather. 11, 14,
23" lengths.



mental hygiene for psychologists and psychiatrists to work over. All the while there is a weakening of moral fibre and the present generation seems to have one objective—get all you can for the least effort. Under such conditions, engineers must accept their responsibilities to help train and direct human behavior for the safety of our country as well as for advantages to the job.

In conclusion, this thought, as expressed by President Wickenden of the Case School of Applied Science: "Every calling has its mile of compulsion, its rounds of tasks and duties, its code of man-to-man relations, which one must traverse day by day if he is to survive. Beyond that lies the mile of voluntary effort when men strive for special excellence, seek self-expression more than material gain and give that unrequired margin of service to the common good, which alone can invest work with a wide and enduring significance. The best fun of life and most of its durable satisfactions lie in this second mile. It is here that a calling can attain the dignity and distinction of a profession."

Green Cross News

—From page 48

tion Dept. of the Association of Casualty & Surety Companies, New York, and the originator of the fundamental concept of the Three E's, has taken over as acting manager.

Dayton Holds Fire School

Early in June the Dayton Safety Council of the Chamber of Commerce, held its First Annual Fire School. The course was given at Frigidaire Recreation Park and was sponsored by the Industrial Fire Prevention Committee of the Council.

Highlights included an address by the chief of Dayton Division of Fire, Forrest B. Lucas.

Artificial respiration, automatic sprinklers in action and "Shocking Facts about Lightning" were among the subjects discussed.

The school was well attended and will be scheduled as an annual event on the Council's program in the future.

"What's the Difference?"

Recently the Safety Council of Greater St. Louis distributed a one-page bulletin dealing with proper care for sunstroke and heat exhaustion, entitled *What's the Difference?* The bulletin pointed out the difference in symptoms and in treatment and emphasized that improper treatment of either ailment can result in disaster. Concise and complete, the bulletin is timely since July and August are the worst months for sun and heat victims. The bulletin is potent argument for sun-dodging during the torrid Summer months.

Built-In Safety

The Home Builders' Association of Greater Cincinnati, in cooperation with the Greater Cincinnati Safety Council, recently presented a program spotlighting many safety features local builders are now installing in new homes in that community.

Four model homes, incorporating these features, were open for public inspection.

Safety emblems directed attention to the new features. High school students, representing Junior Safety Councils, served as hosts and hostesses.

Dayton's New Chairman

The new chairman of the Dayton Safety Council of the Chamber of Commerce is Dr. J. J. Burbage, executive director of Monsanto Chemical Company's Mound Laboratory. He succeeds Mr. Carl Copp, chairman for the past two years, who finished his term on April 30.

On behalf of the Safety Council, Mr. Copp was presented an appropriately engraved desk pen set in appreciation of his services to community safety.

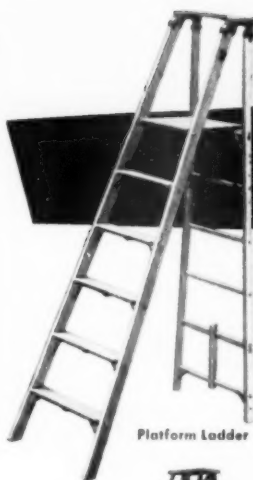
Eastbay's Annual Meeting

Paul Reagor of Albert Brown Undertaking Parlors, Oakland, a prominent business man of the Eastbay area, is the new president of the Eastbay Chapter, National Safety Council. He succeeds Robert P. Tracy and took over his office at the annual meeting of the Chapter, a luncheon gathering on Friday, June 26, attended by approximately 150 Council members.

The program included presenta-

None Finer at Any Price!

GOLD MEDAL LADDERS and TRESTLES



Platform Ladder



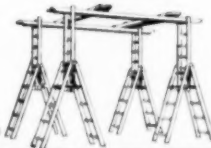
Extension Ladder



Single Ladder



Underwriter Step Ladder



Wood Trestles



For Greater Safety...Efficiency...Economy

THE PATENT SCAFFOLDING CO., Inc.

38-21 12th St., Dept. NSN—Long Island City 1, N. Y.

SEE YOUR CLASSIFIED TELEPHONE DIRECTORY FOR NEAREST OFFICE

Cost Less Per Year . . . Because They Last Longer

For safety's sake it pays to buy the best. Your men can do more and better work on safer equipment. Gold Medal Ladders and Trestles, made in a large, modern, ladder plant, are backed by more than seventy years of experience. They're stronger, safer, and withstand hard usage years longer.

TYPES AND SIZES FOR EVERY NEED

Write for new Catalog L-71 of ladders and scaffolding accessories.

Ladders and scaffolds for any purpose any time—any place



PELLENT...

NO MORE MOSQUITO BITES

No more lost time fighting mosquitoes, flies, chiggers, etc. . . no more swatting around in dangerous quarters . . . no more itching welts to distract workers. An application of Pellent lasts at least six hours . . . costs less than 2¢. In handy cream form . . . no stickiness . . . doesn't come off easily with perspiration. Packaged exclusively by MScO under the Unit System to fit all standard unit type first aid kits. Six non-leaking tubes per Unit. Write for descriptive folder.



Medical Supply Company

"It pays to buy from Medical Supply"

ROCKFORD, ILLINOIS • IN CANADA, IT'S SAFETY SUPPLY CO.

New DRY TAMP PERMA Mix Floor Patch

Don't stop traffic to repair floors—use Permamix, the new all-temperature DRY TAMP floor patch.



DRY TAMP MEANS SPEED • No sticky mass to dig out of the drum or to handle • Permamix dry pours • sets instantly • feather edges perfectly • no production delays • non-skid surface.



ALL TEMPERATURE • Won't freeze • can be stored or used in any temperature • will store indefinitely • a stock room item • will not "set" in drum whether open or covered. Mistakes just can't happen. Tamp in place and traffic rolls.



CUTS MAINTENANCE COSTS on concrete, brick, tile or asphalt floors • no special equipment or skill needed • a one man job • comes in durable 50 lb. net wt. fibre drums • solve your floor patching problems for good.

Write for Details Now!

PERMAMIX CORPORATION

155 W. WACKER DRIVE

CHICAGO 1, ILLINOIS

SAFETY EQUIPMENT FOR ALL INDUSTRIES

What's the Score?

A Constant Reminder
of Days worked without
a Lost-Time Injury.



SAFETY SCOREBOARD

COMMANDS ATTENTION;
PROMOTES SPIRIT OF
WORKING SAFELY; MAIN-
TAINS DAILY INTEREST OF
EACH DEPARTMENT; MAKES FOR WELL INFORMED ORGANIZATION.

Size 20" wide by 30" high . . . 20 gauge metal . . . baked dulux finish . . . green background with white letters. Blocks in special black-board finish so that they may be changed with chalk from day to day.



WRITE FOR BULLETIN NO. 82

Safety Equipment for all Industries

INDUSTRIAL PRODUCTS COMPANY

2850 N. FOURTH ST. • PHILADELPHIA 33, PA.

tion of the National Traffic Safety Contest special award to Oakland for outstanding achievement in community safety organization. Four special awards were presented by the Chapter to the National Automobile Club, California Association of Insurance Agents, the Oakland Association of Insurance Agents and the Berkeley Association of Insurance Agents, for their help in the Operation Safety program the past year.

Special Chapter awards were given to Jack Burroughs, local newspaper columnist, and Frank Kettlewell, *Oakland Tribune* photographer. Another special award was given to Marge and Gower Champion, Hollywood dancing team, currently playing in San Francisco for their interest in community safety.

The National Safety Council award was presented by Tom A. Burke, acting director of the Western Regional Office.

3,500 Jaywalkers

San Francisco police are handing out jaywalking cards to traffic pedestrian violators, following a preliminary promotional campaign conducted by the San Francisco Chapter, NSC, in cooperation with the Police Department.

During the first week 3,500 jaywalkers were given warning cards. To add further emphasis the Chapter arranged for stenciling of 400 intersection corners with the warning "Wait on Curb" and the Green Cross emblem.

On July 6 police started taking names and addresses of jaywalking violators and later the Department will begin to hand out tickets, to appear in court.

Distinguished Service

—From page 64

Woodside Mills, Greenville, S. C., Plant.

AWARDS OF MERIT

Armstrong Rubber Manufacturing Co., Des Moines, Ia. (Entire company).
Atlas Powder Co., Reynolds Works, Tamaqua, Pa.

—White Haven Works.
Bethlehem Steel Corp., Sparrows Point Plant.

Brush Beryllium Co., Luckey, Ohio (Entire company).

Burgess Battery Co., Freeport, Ill. (Entire company).

The Carborundum Co., Niagara Falls, N. Y. (Entire company).
Colgate-Palmolive-Peet Co., Ltd., Toronto, Canada, Plant.

Container Corp. of America, Boston Plant, Medford, Mass.

—Fernandina Beach Plant, Fla.

—Ogden Plant, Chicago.

Crown Cork & Seal Co., Inc., Closure Div., Baltimore, Md.

Dow-Corning Corp., Midland, Mich. (Entire company).

E. I. duPont de Nemours & Co., Carothers Research Laboratory.

—Doyle Works.

—Du Pont Works.

—Engineering Research Laboratory.

—Grasselli Works.

—Houston Works.

—Jackson Lab.

—Mechanical Development Laboratory.

—Newark Plant.

—New Brunswick Works.

—Paulsboro Works.

—Perth Amboy Plant.

—Petroleum Laboratory.

—Pioneering Research Lab.

—Polychemicals Research Lab.

—Rubber Laboratory.

—Seaford Plant.

—Toledo Grasselli Works.

—Washington Works.

Exchange Orange Products Co., Ontario, Calif. (Entire company).

Firestone Tire & Rubber Co., Buenos Aires, Argentina, Plant.

—Bunford, England, Plant.

Frink Sno-Plows, Inc., Clayton, N. Y. (Entire company).

General Electric Co., Research Laboratory, Schenectady, N. Y.

Heintz Manufacturing Co., Philadelphia, Pa. (Entire company).

H. J. Heinz Co., Berkeley, Calif., Factory.

—Tracy, Calif., Plant.

International Harvester Co., Memphis Works.

International Paper Co., Temiskaming, Quebec, Mill.

Jones & Laughlin Steel Corp., Electric Weld Tube Div.

Judson Mills, Greenville, S. C., (Entire company).

Kimberly Clark Corp., Neenah Mill, Neenah, Wis.

Kingsport Press, Inc., Kingsport, Tenn. (Entire company).

Kraft Foods Co., Garland, Texas Unit.

Line Material Co., Birmingham, Ala. (Entire company).

Long Lac Pulp & Paper Co., Ltd., Terrace Bay, Ontario, Canada.

Mars, Inc., Chicago (Entire company).

M. H. McGraw & Co., M. W. Kellogg Co., AEC Project.

National Distillers Products, Old Crow Distillery, Frankfort, Ky.

National Gypsum Co., Buffalo, N. Y. (Entire company).

New York Transit System, (Entire company).

—Next page

Safety GRIP-STRUT

gives Maximum Strength with Minimum Weight

NON-SKID
RUGGED
LOW COST
VERSATILE



A Globe patent feature (Patents Pending)

Not welded, not riveted, not expanded, all one piece of material, gives a non-skid surface in *all* directions, a diamond shaped pattern with open space area in excess of 75% of surface, easily cleaned, sanitary. Simple to install, ideal for on-the-job fabricating, replaces existing grating with no supporting structural changes necessary. Strong yet light in weight. Ideal for stair treads, work platforms, catwalks, flooring, running board steps, in fact for any purpose where safe flooring is a factor. Available in steel or aluminum. Write for new catalog, showing new low prices, methods of application, typical installations and list of nationally known users.



Distributors in all principal cities.
GRIP-STRUT division
THE GLOBE COMPANY
Manufacturers since 1914
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BEAT THE HEAT!

NEW

E-X-P-A-N-D-E-D COTTON* SWEAT BANDS

ONLY 2½¢ EACH



So inexpensive, they can be used and thrown away...
So strong, they can be rinsed and used repeatedly!

Here's the answer to perspiration...super-soft, super-absorbent E-X-P-A-N-D-E-D COTTON SWEAT BANDS. Real comfort for those hot-spot jobs... a *better* band at a *lower* price.

Perfectly designed. No metal parts to rust or chafe, cotton-covered elastic holds band firmly but you can't even feel it. Get E-X-P-A-N-D-E-D COTTON SWEAT BANDS from your regular dealer in safety or first aid supplies. *Write us for free sample today.*

GENERAL BANDAGES, INC., Chicago 5

Makers of GAUZTEX—The bandage that sticks to itself

FEATHER-LIGHT—You feel only soft cool, comfort!

***E-X-P-A-N-D-E-D COTTON**—Cotton-backed gauze expanded to 8 times normal thickness!

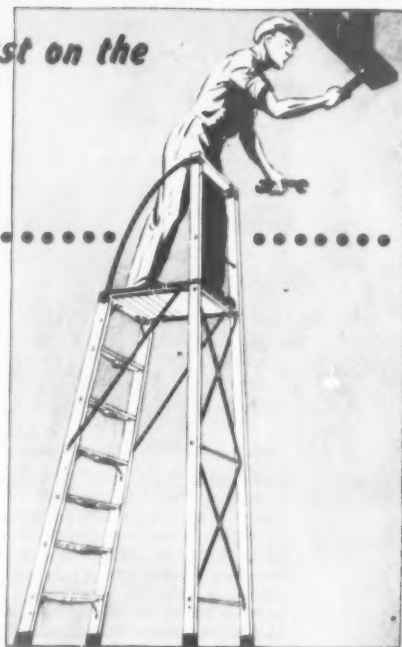
FOUR-LAYER FOLD—Extra absorbent capacity!

NO METAL—Only pure cotton and cotton-covered elastic. No rusting, chafing, no discomfort.

high jobs go fast on the safety level.....

Dayton's special "Safety Level" working platform gives workman complete confidence. He works faster, more efficiently, uses both hands. Check the "big 6" features that make Dayton your best buy.

1. Rail-guarded "Safety Level" platform.
2. Locks in place automatically.
3. Rubber safety shoes.
4. Light weight—great strength.
5. Economically priced.
6. Complete size range 3' to 16' in height.



Write Dept. D for Bulletin

Dayton safety ladders

Dayton
safety ladder co.
2339 Gilbert Ave., Cincinnati, Ohio

In Canada: Safety Supply Co., Toronto

WHY the M & M RAIL CLAMP IS USED IN HEAVIEST INDUSTRIES

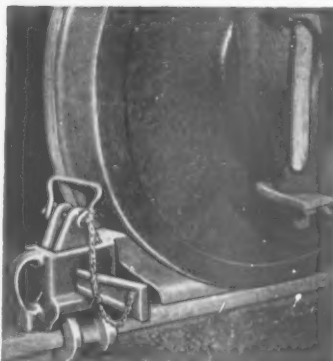
Because it resists weight of heaviest cars and thus reduces danger of costly derailments and injuries to workers.

Its safe, dependable performance is proven in steel mills, ship yards, quarries, mines and cement plants.

The M & M Rail Clamp is compact, complete and easy to use. No blocks, ties or shims are necessary. It saves time in moving up.

The wedge is attached to the clamp with a strong steel chain. Sturdy handle makes carrying easier.

Order an M & M Rail Clamp and see how dependable it is. Fits any rail, worn or new. Available in two sizes—Model A, 40 to 100 lb. rail and Model F, 110 to 175 lb. rail.



SAFETY FIRST SUPPLY COMPANY

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Otis Elevator Co., Harrison, N. J. Works.

Owens-Illinois Glass Co., Plant 6, Charleston, W. Va.

—Plant 3, Fairmont, W. Va.

—Plant 12, Gas City, Ind.

—Plant 2, Huntington, W. Va.

Pacific Mills, Lawrence Div.

Pillsbury Mills, Inc., Buffalo, N. Y. Unit.

Pittsburgh Plate Glass Co., Works No. 1, Creighton, Pa.

Pittsburgh Railways Co., Pittsburgh, Pa. (Entire company).

Reynolds Metal Co., Reynolds Mining, Alexander, Ark.

—Sheffield, Ala. Unit.

—South Plant, Richmond, Va.

Shakespeare Co., Kalamazoo, Mich., (Entire company).

Solar Aircraft Co., San Diego, Calif. Plant.

Synthane Corp., Oaks, Pa. (Entire company).

Union Carbide & Carbon Research Laboratories, Inc., Niagara Falls, N. Y., Unit.

Union Pacific Coal Co., Reliance No. 7 Mine.

U. S. Pipe & Foundry Co., Chattanooga Works.

Visking Corp., Chicago, Home Office Div.

Walworth Co., Boston Works.

Western Electric Co., Inc., Installation Organization Unit.

—Point Breeze Works, Baltimore, Md.

Wilkening Manufacturing Co., Philadelphia (Entire company).

CERTIFICATES OF COMMENDATION

American Air Filter Co., Inc., Louisville, Ky., Plant 2.

American Cyanamid Co., North American Cyanamid, Ltd., Ingersoll, Ontario, Quarry Division.

The American Tobacco Co., Nashville Branch.

—Newport News Leaf Department.

Armco Steel Corp., Tubing Plant.

Berkshire Fine Spinning Associates, Inc., King Philip "E" Div.

Cabot Carbon Co., Estes Plant.

—Guymon Plant.

—Hobbs Plant.

—Keystone Plant.

—Oil & Gas Plant.

—Pampa Plant.

—Pampa Office.

—Schafer "A" Plant.

—Walton Plant.

—Wickett Plant.

Container Corp. of America, Folding Box Plant.

Corn Products Refining Co., Bedford Construction Co., Pekin, Ill.

Eaton Manufacturing Co., Research Laboratory, Machine Shop.

Firestone Tire & Rubber Co., Christchurch, New Zealand, Plant.

—Memphis Flotation Gear Division.
General Electric Co., Anaheim, Calif.,
Plant.

—Eastern Regional Warehouse, Tube
Dept., Electronics Div.

—Carboloy Dept., Edmore Plant.

—Automatic Blanket Div.

—Chemical Division General Office.

—Insulating Products Plant.

—Mold Manufacturing Plant.

Gifford-Hill & Co., Inc., Dallas,
Texas, Greer No. 8.

Hotpoint Co., Plant No. 14.

Kraft Foods Co., Berryville, Ark.,
Unit.

—Pinconning, Mich., Unit.

Monsanto Chemical Corp., Central
Research Department.

Pittsburgh Plate Glass Co., Shop No.

2.
United States Gypsum Co., Siguro,
Utah, Unit.

U. S. Steel Co., Oliver Iron Mining
Co., Div., Arctus Open Pit Mine, Mar-
ble, Minn.

—Fraser Underground Mine.

—Hibbing Crushing Plant.

—Moler Dolomite Quarry.

—Mt. Iron Crushing Plant.

—Pillsbury Open Pit Mine.

—Research Laboratory.

—Sherman Crushing Plant.

—Trout Lake Concentrator.

—Virginia Crushing Plant.

Union Pacific Coal Co., Stansbury
No. 3 Mine, Rock Springs, Wyo.

Western Electric Co., Inc., Brook-
lyn, N. Y., Distributing House.

—Duluth Shops.

Westinghouse Electric Corp., Baton
Rouge Manufacturing and Repair.

—Charlotte Manufacturing and Re-
pair.

—Cleveland Manufacturing and Re-
pair.

—Denver Manufacturing and Repair.

—Electronic Tube Div.

—Milwaukee Manufacturing and Re-
pair.

—Philadelphia Manufacturing and
Repair.

—Seattle Manufacturing and Repair.

—Wilkes-Barre Manufacturing and
Repair.

Approach Shots

—From page 29

bright idea that doesn't have to be turned down flat, even though it is screwball in some fundamental way. A guy comes in, say, with the idea that we ought to put in an elaborate set of photo-electric controls on some bank of machines where our experience really isn't too bad. Okay, you and I know the proposal is impractical. We have to reject it. But before we do, let's stop and ask ourselves, 'Why did this particular guy come

Overhead work's a **SNAP!**
with the **NEW**
Ladscaf
SCAFFOLDING



**PLACE IT!
SNAP IT!**
NO BOLTING
WITH
'SNAP CLAMPS'



FOR EVERY PAINTING
& MAINTENANCE JOB

Exclusive Ladscaf feature "Snap-Clamps" bridges and braces to panels without bolting or using tools. Easily erect simple towers, mount on casters or extend in runs to scaffold large interiors. "Climb" stairs or erect on sloping floor levels with ease.

Call on UNIVERSAL'S ENGINEERING SERVICE to help you plan your Scaffolding Layouts by combining Ladscaf with Universal Ezebilt and Endlok pipe-and-clamp scaffolding. Write for informative catalog S-8.

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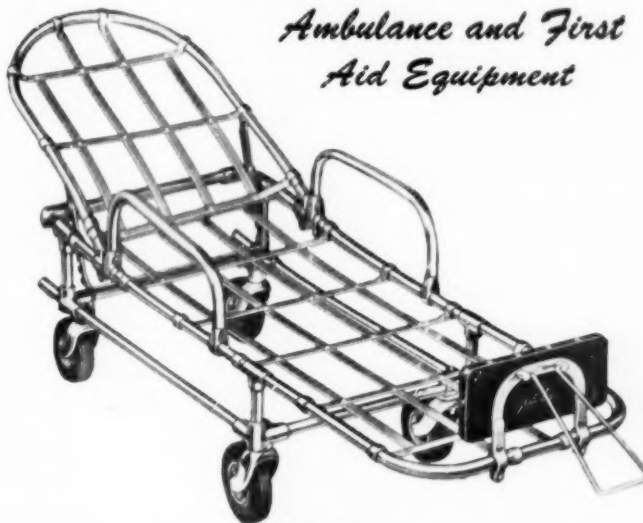
"World's Largest Producer of Steel-Panel Scaffolding"

Distributors Offer Fast Help and Service - Consult Your Phone Directory

handle **THE INJURED** with care
Use

BOMGARDNER

*Ambulance and First
Aid Equipment*



write for Catalog

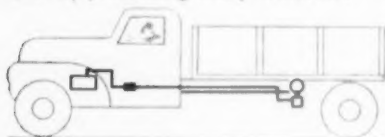
THE BOMGARDNER MANUFACTURING CO.
1384 HIRD AVENUE CLEVELAND 7, OHIO

McDonald REVERSALARM

keeps the road clear
—BEHIND!



To protect workers in the path of backing-up trucks, equip your rolling stock with McDonald Reversalarm! Its powerful gong automatically sounds with unmistakable authority within the truck's first 8 inches of backward motion. Completely automatic — works even without truck motor running! Sturdy, weatherproof Reversalarm lasts for years — pays for itself many times over by preventing costly accidents.



Installing Reversalarm is easy. Its automatic interrupter switch connects to transmission speedometer cable take-off. Operates on 6- or 12-V systems.

WRITE FOR
BULLETIN & PRICES

B-F-McDonald
COMPANY

Manufacturers & Distributors of
Industrial Safety Clothing & Equipment



5721 West 96th St., Los Angeles 45
Other Offices in San Francisco and Houston

up with this idea at this time? Is there really something wrong with the bank of machines, some hazard that we haven't thought of? Is this idea a misguided attempt to deal with a real problem? If it is, and the hypothesis is certainly worth checking on, then action is called for. And if we act to deal with a problem to which an employee called our attention, then we are really accepting his suggestion even if we modify his proposed solution of the problem drastically."

Morgan nodded. "I can see that. But that still leaves cranks, boobs, crackpots and troublemakers, whose brainstorms have no relation to a real problem. How do you deal with them?"

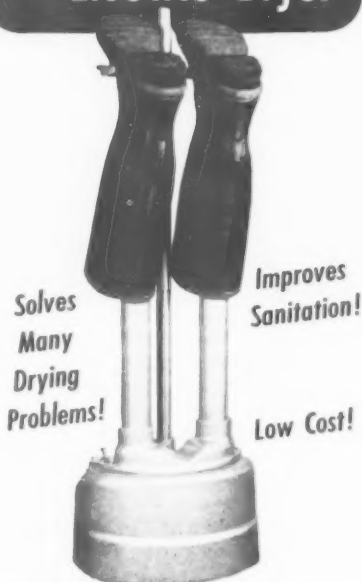
"How do you deal with your wife when she wants a fur coat you can't afford to buy?" I asked. "You explain why you don't do what she wants. And just how you explain depends on who your wife is, what kind of argument you've learned is effective with her. And what kind of a mood she's in, and how good your credit is with her at the moment. Sometimes, you can slap an employee idea down brusquely. More often you look interested and patiently explain why you don't accept it. And always, everlastingly, you've got to be grateful to the man for bringing the idea, and make him feel you are grateful."

"A guy would have to be a Barrymore to put on that kind of grateful act in reply to some ideas I get dumped on my desk," Morgan said.

"A guy," I said, "either has to be a Barrymore, or else he has to feel as grateful as he acts. Me, I try to keep remembering the dumbest idea in the world is just a part of the same process of thinking in the collective mind of our people that brings me the good ideas now and then. When I remember that, I can be grateful, and then looking grateful isn't a pose."

Morgan finished tying his street shoes and stood up. "Maybe you do a better job of approach than I do, on and off the course. I'll think about it. Meantime, I can still outdrive and outputt you, so come on over to the bar and pay your just debts."

NEW! Sani-Dri Electric Dryer



Solves
Many
Drying
Problems!

Improves
Sanitation!

Low Cost!

A FAST, EFFICIENT WAY TO DRY BOOTS, SHOES, RESPIRATORS

Wherever there is a moisture problem ... sanitizing workers' equipment ... along the assembly line ... in "hard-to-reach" places ... the new Sani-Dri provides fast, low-cost drying service. Drying is done quickly with heated air stream of 125 cu. ft. of air per minute. Portable, yet built to give years of trouble-free service. Write for complete information today!

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HAND OR HAIR
DRYER FOR
WASHROOMS



A new, faster-drying, high-speed electric dryer with patented features not available in any other machine. Easily attached to any type wall. Modernizes washrooms, eliminates towel litter ... saves towel and maintenance expense. Distributors in Principal Cities.

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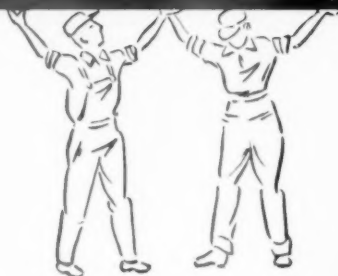
Again...

**Gro-Cord sets a
New Standard for
Industry with**



NEO CORK

SOLES & HEELS



**MILLIONS
OF
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Gro-Cord Rubber Co., the largest manufacturer of neoprene bottom stock, has set a new standard for industry with

"Neo-Cork" soles and heels. "Neo-Cork" the result of combining real cork with DuPont neoprene, provides a slip resistant, lightweight, flexible and longer wearing sole and heel that is also resistant to oil, gasoline, heat, acids and caustics.

Proved by use in all types of industry under varying work conditions, Neo-Cork has become one of the most popular and fastest selling soles and heels on the work shoe market.

Next time you buy—try "Neo-Cork"—for safety—for comfort—for longer wear. They are found on better quality work shoes everywhere.

SIZES available in brown or black

18-14 iron— 7 through 15

14 iron— 7 through 14

6/8—7/8 heel size 8-9 through 13-14
(13 washer)

GRO-CORD RUBBER CO.

LIMA, OHIO

Canadian Plant
GRO-CORD RUBBER CO. of CANADA LTD.
Tilsburg, Ontario

- LONG WEARING
- LIGHTWEIGHT
- SLIP RESISTANT
- RESIST
OIL-HEAT-ACIDS
CAUSTICS



For a Successful Poster Program



JUMBO POSTER for SEPTEMBER 1953

The Jumbo poster, issued monthly, is designed for outdoor use and is available to members on annual subscription but is not stocked. Its actual size is 9' 11" by 11' 8".

THE 1953 Poster Directory contains miniatures of 756 posters—top-notch selections on a great variety of subjects. Extra copies available at 50 cents each—write Membership Dept., N.S.C.

Posters miniaturized in these pages are new—shown here for the first time.

Those posters illustrated in one color on the following two pages are actually printed in two or more colors.



NATIONAL SAFETY COUNCIL

V-9983-A

8 1/2 x 11 1/2



NATIONAL SAFETY COUNCIL

9889-A

8 1/2 x 11 1/2



NATIONAL SAFETY COUNCIL

9994-C

25x38

The two new four-color posters (above) are illustrative of the 72 four-color posters shown in the 1953 Poster Directory.

Above new "C" poster, issued monthly, is indicative of the other two color posters—shown in one color on the following pages and in the 1953 Poster Directory.

Electrotypes of poster miniatures on this page are not available, nor can payroll inserts be supplied.

Posters below are printed in two or more colors
(Available only in sizes indicated)



NATIONAL SAFETY COUNCIL

9844-A

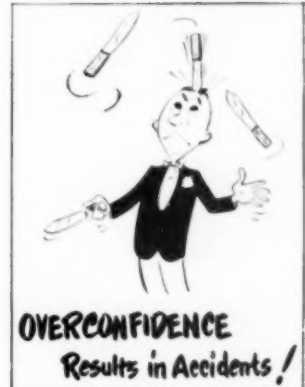
8 1/2 x 11 1/2



NATIONAL SAFETY COUNCIL

9877-A

8 1/2 x 11 1/2



NATIONAL SAFETY COUNCIL

9921-A

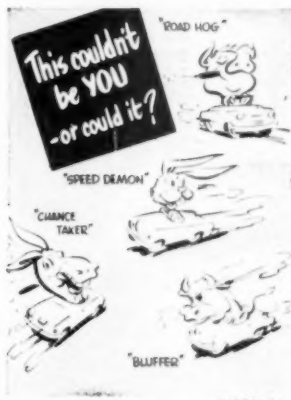
8 1/2 x 11 1/2



NATIONAL SAFETY COUNCIL

9975-A

8 1/2 x 11 1/2



NATIONAL SAFETY COUNCIL

9800-B

17 x 23



NATIONAL SAFETY COUNCIL

9964-A

8 1/2 x 11 1/2



NATIONAL SAFETY COUNCIL

9885-B

17 x 23



NATIONAL SAFETY COUNCIL

9906-B

17 x 23



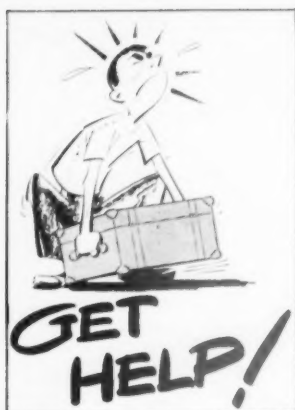
NATIONAL SAFETY COUNCIL

9934-A

8 1/2 x 11 1/2

Electrotypes of payroll inserts can be furnished in all poster illustrations shown above.

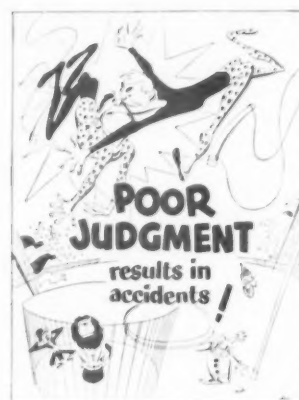
Posters below are printed in two or more colors
(Available only in sizes indicated)



NATIONAL SAFETY COUNCIL
9804-B 17x23



NATIONAL SAFETY COUNCIL
9926-A 8½x11½



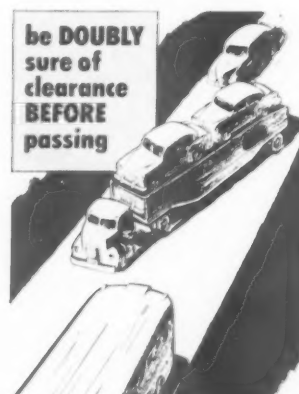
NATIONAL SAFETY COUNCIL
9863-B 17x23



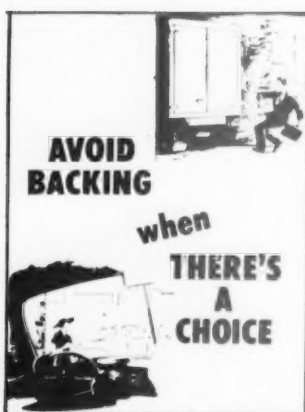
NATIONAL SAFETY COUNCIL
9898-A 8½x11½



NATIONAL SAFETY COUNCIL
9924-A 8½x11½



NATIONAL SAFETY COUNCIL
V-9962-B 17x23



NATIONAL SAFETY COUNCIL
V-9965-B 17x23



NATIONAL SAFETY COUNCIL
V-9982-B 17x23



NATIONAL SAFETY COUNCIL
V-9930-A 8½x11½

Electrotypes of payroll inserts can be furnished in all poster illustrations shown above.



WHAT'S NEW

IN

NATIONAL SAFETY COUNCIL SERVICES *

WORKING TOGETHER MEANS WORKING SAFELY



When two people or more are a part of a task or a team of people, the first thing they do is talk over the task they're going to give to. And then they agree on the rules they will follow. If they don't do this, they couldn't have a successful team.

A common set of rules is also important for a group of people to work together successfully—and safely.

This booklet presents the experience gained in practice for working together safely. These practices have been developed as a result of the experience and suggestions of workers, supervisors, and safety specialists in five and other industrial organizations all over the country.

Each of these practices has proved value in helping



prevent accidents. Mostly, they are common sense practices that all skilled workers naturally take because, in addition to preventing injuries, they are the best way for doing the job.

Without a set of safety practices such as the ones in this booklet, you would have no way of knowing what you have to do to prevent injury to yourself and to others. You wouldn't have any way, either, of knowing if the other fellow was doing something that could endanger you.

It's to your advantage to learn the safe practices presented in this booklet, and to practice them all the time. Then you will be doing your part toward preventing injury to yourself and your fellow workers. We must all work together to work safely.

This new employee rules book should be particularly valuable to companies that have no accident prevention rule book of their own.

Employee Rules Book

Working Together for Safety is an employee rules book intended to help workers learn standard safety procedures. The handy 24-page booklet contains safety information applicable to workers in most industrial organizations. It is of particular use for those companies that do not have their own rules book on accident prevention.

The booklet presents those well-established safety practices that have been developed as a result of experiences of workers, supervisors and safety specialists in plants all over the country. Beginning with a list of general safety

regulations, the booklet continues with special sections on machine operation, hand tools, power tools, protective clothing, fire prevention, materials handling, and many other accident prevention topics.

Bound in a heavy paper cover and printed in two colors, *Working Together for Safety* will serve as a permanent guide and reference work for each employee. A sample copy of the booklet, which measures 4 by 7 inches, will be sent on request.

Five Minute Safety Talks

The new edition of the *Five-Minute Safety Talks for Foremen*

has just come off the press. The 1953 edition of this popular series includes 52 talks designed to aid foremen in conducting weekly safety meetings.

This year the emphasis is on specific types of machinery and hazards. For example, there are talks on table saws, band saws, lathes and bench grinders. There are talks on hazardous materials such as sulfuric acid, ammonia and caustic soda.

Two sections, one devoted to health and the other to walking and driving hazards, give the foreman information his men can use to stay safe off the job.

As in previous years editions, the pages of the book are perforated so they may be readily removed for individual use.

Fire Prevention Booklet

There'll be a hot time in the ol' plant is the title of the Council's new employee training booklet that shows workers what they can do to keep their plant—and their jobs—from going up in smoke.

Using the cartoon approach, that proved so popular in the booklet, "Deadly Ideas," the new publication illustrates the careless habits that cause disastrous fires, with their risk to life and income of the employee.

A collection of fire bugs—the smog slob, the junkie, the block-buster, the punk, the packracker, the lampwick, the part-time genius—show the sloppy, hazardous methods of handling potential fire starters. A safe worker stands ready in each case to show the smart and safe way to do the job.

The 16-page booklet covers the safe and unsafe way of welding, using solvents, disposing of cigarettes, using electricity and handling waste. A page is included on what to do if a fire occurs and another shows the type of fire-fighting equipment to use on Class A, B and C fires.

A sample copy of the booklet, which measures 4 by 7 inches and is printed in four colors, will be sent on request.



Look to this page each month for latest news about NSC services. Address requests for additional information, samples or prices to the Membership Department.

FOR OVERHEAD MAINTENANCE

Painting...
Lighting...
Cleaning...



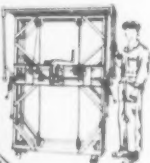
HI-LIFT Portable WORK PLATFORM

- No Erection Required
- Use at Any Height
- Safe, Sturdy, Dependable
- No Loose Parts
- Easily Rolled... Easily Raised

Sturdy, all welded steel construction means absolute safety... outrigger brace prevents tilting or rolling. Small enough to pass through doorway, yet raises to 20 ft. Endorsed by leading concerns.

Also Makers of HI-LIFT Extension Scaffold and ATLAS Portable Loading Platform.

Write for
Complete
Information



ATLAS
INDUSTRIAL CORP.
866 39th Street
Brooklyn 32, N. Y.

Are Your Slings Safe?

—From page 23

the 55 degree horizontal angle. (Chart 2)

Required safe load W , at given angle of spread = safe load for two vertical rope \times factor in column C
 $= 9,200 \times .8192$
 $= 7,536$ pounds.

2. What diameter rope must be used in a two-leg bridle sling to handle 10,000 pounds when legs are spread at an angle of 80 degrees?

As in the first example the chart will show that with the legs spread at an angle of 80 degrees, horizontal angles would be 50 degrees each. One half the load or 5,000 pounds must be carried by each leg.

To calculate the tension developed in each leg by this vertical load of 5,000 pounds multiply the load by the factor in column D opposite the angle of 50 degrees.

Tension T in one inclined leg = $\frac{1}{2}$ total vertical load \times factor in column D
 $= 5,000$ pounds $\times 1.3054$
 $= 6,527$ pounds

Applying a factor of 7, a rope with a breaking strength of 45,639 pounds or 22.3 tons is required. This would indicate a $\frac{3}{4}$ inch 6x19 wire rope.

Safeguard for Centrifuging Operations

A MINOR STEP in producing plutonium at General Electric's Hanford plant in Southeastern Washington is a centrifuging operation in which two heavy pieces of uranium metal are cleaned by whirling action.

Until recently, the centrifuge had no lid, and the operator put it into action by stepping on a foot switch. Occasionally one of the pieces left its centrifuge seat and was ejected at high speed into the work area.

To overcome this hazard, a lid was installed, and was made neglect-proof by tying it into the starting system. The foot switch was replaced by a single-pole, single-throw switch so placed that lowering the lid closes the switch. The switch is in series with a timer. When the lid closes the switch, current passes through the circuit of the centrifuge motor and

at the same time actuates the timer. The latter reopens the motor circuit after six seconds.

If the lid is inadvertently raised before the time cycle is over, the switch, timer circuit and centrifuge motor circuit open in quick sequence. Dynamic braking then quickly decelerates the centrifuge.

Thus, the device can rotate only when the lid is in the safe or closed position.

Looking for Trouble

—From page 25

- Is equipment not in use in disorderly arrangement?
- Is equipment in use arranged for efficient operation?
- Are there any empty packing boxes or packing material which have not been disposed of?
- Are receptacles for waste material adequate?
- Are heavy storage boxes stacked too high?
- Is arrangement of equipment in lockers too crowded?
- Are any aisles obstructed? (a constricted main aisle is particularly objectionable)
- Are there any cards on floor and across aisles?
- Is there any tobacco debris on floor?

A Zoologist Writes:
"Every imaginable remedy tried for protection against ticks and chiggers; only Ticks-Off" passed the acid test."

STOP INSECT BITES!
PREVENT DISEASE & INFECTION!

TICKS- OFF



More Than A Repellent

SAFE! FAST! Keeps away Chiggers, Ticks, Mosquitoes, Flies. A few sprays protect you all day!

12 Oz. Bombs

Do you know that biting ticks transmit to humans twice the number of tularemia cases than handling or skinning of rabbits.

Distributed by

Mine Safety Appliance Co.

Braddeck, Thomas & Meade Streets
Pittsburgh 8, Pennsylvania





54 Branch Offices in the United States

- l. Is there general uncleanness and dust?
- m. Are there any miscellaneous tripping hazards?
2. Are there any poorly guarded or unguarded moving parts?
3. Are there any rough or sharp corners on equipment?
4. Are floors slippery?
5. Are floors defective?
6. Are there any unguarded work areas below men working aloft?
7. Are tools parked on ladder steps?
8. Is hot equipment such as soldering irons properly guarded?
9. Are ladders adequate?
10. Are operating instructions posted for drill presses and other rotating machinery?
11. Is office space in laboratories well segregated and located?
12. Unsafe design of equipment or laboratory layout
 - a. Are portables unnecessarily bulky?
 - b. Are portables unnecessarily heavy?
 - c. Do doors swing in wrong direction or are they hinged on wrong side?
 - d. Are there any top-heavy setups on tea carts, racks or benches?
 - e. Is there any unanchored shelving?
 - f. Are there any unstable racks or cabinets?
 - g. Is lighting adequate for operations being performed?
 - h. Are chairs, boxes or stools used to support test equipment?
13. Office Hazards
 - a. Are file and desk drawers kept closed?
 - b. Are there any heaps of useless debris?
 - c. Are there any protruding telephone outlet stubs?
 - d. Is furniture splintered or in ill repair?

Electrical

1. When was power wiring at each outlet last checked?
2. Are protective measures taken when Class B or Class C voltages are involved?
3. When were cases on portables last checked for grounds?
4. Is there a convenient and evident means of turning off power? Is there a fuse?
5. Are warning signs posted in areas where Class B and Class C voltages are present?
6. Are warning signs posted where radiation hazards exist?
7. When were grounded housings and frames last checked for ground?
8. Are there rubber mats in Class C voltage areas?
9. Are people working alone in rooms with exposures exceeding 300 volts?
10. Are any working clearances in violation of rules? —Next page

SURETY'S SURESEAL INDUSTRIAL GLOVES TURN-CUFF OR STANDARD GAUNTLET

-  10 Times higher abrasion resistance in standard abrasion tests.
-  4 Times higher snag resistance in standard puncture tests.
-  Turn Cuff style with no drip feature and 2 inch longer gauntlet.
-  Surety's Sureseal synthetic rubber gives much higher resistance to industrial chemicals than either natural rubber or standard synthetics.

Phone your jobber or write direct.

THE
SURETY
CARROLLTON, OHIO
RUBBER CO.





if EYES could talk they'd say — EYEGARDS

because they prefer

the Goggles With the 10-Way Ventilation

BEST THING NEXT TO YOUR EYES

● EYEGARDS assure workers the very finest in eye protection and comfort — yet THEY ARE PRICED SURPRISINGLY LOW! Compare these outstanding features! — built-in comfort because the super-light plastic "form-fits" the face — greater protection because of exceptional high impact resistance — extra ventilation through three large vents at side of cup and seven additional vents around the lenses — cool and completely fog free. Get the "inside story" today. Write for free catalog.



FORM
FITTING



3 LARGE
VENTS
AROUND CUP



SUPER-LIGHT
PLASTIC



7 VENTS
AROUND
EACH LENS

● Illustrated is the No. 335 Welder's Cover-spec Goggles. A wide range of other types are available at savings.

AMERICAN INDUSTRIAL SAFETY EQUIPMENT COMPANY
3501 LAKESIDE AVENUE CLEVELAND 14, OHIO
DIVISION OF THE BURDETT OXYGEN COMPANY, Cleveland, Ohio

Most safety engineers remember Vul-Cork as the first really light cork-and-rubber safety sole.

It is still the lightest cork-and-rubber safety sole on the market. Add that fact to its other characteristics and you have a sole that helps sell the safety idea to your workers.

specify
VUL-CORK
 and
VUL-CORK
NEOPRENE
SAFETY SOLES

Anti-Slip - won't pick up chips
 ... light, resilient, flexible.
 Vul-Cork Neoprene resists oil,
 grease, acids, hot metals.
 Write for samples.

CAMBRIDGE RUBBER CO.
 Vul-Cork Div., Taneytown, Md.
 ... makers of **Vul-Cork**

Chemical

1. Are any explosive, corrosive, or poisonous chemicals, or gases under pressure stored in area?
2. Are they stored in labeled containers?
3. Are they segregated so as to be safe from spilling and breakage due to mechanical operations in same area?
4. Are quantities reasonable?
5. Are any unnecessary chemicals around?
6. Are those using chemicals familiar with the specific hazards?
7. Are Bunsen burners equipped with approved hose?

Fire

1. Are fire extinguishers in optimum location?
2. Is number of and location of extinguishers adequate for the activity?
3. Are procedures in case of fire understood by personnel?
4. Have personnel had any instruction in the use of fire apparatus?
5. Are any materials unnecessarily stored which would aggravate the spread of fire?
6. Are volatile combustibles or explosives stored in area?
7. Are required combustibles or explosives kept in approved labeled containers?

PERSONAL

[Appraisal of Safety Behavior]

General

1. Are any improper attitudes evident? (reckless, lazy, uncooperative, fearful, absent minded, excitable, any mental aversion to job)
2. Are any improper habits evident such as haste and impatience? (Haste is a contributing cause in many types of accidents)
3. Is there evidence of instinctive safety behavior?
4. Is there evidence of accident proneness?
5. Is there evidence of enthusiasm for safe procedures?
6. Is there evidence of inexperience or lack of skill in type of work?
7. Are there any handicaps such as impaired hearing, impaired sight, illness or energy deficiency?
8. Is there any difficulty in adjusting to environmental factors such as noise, temperature and ventilation?

Specific

1. Are available protective devices being used where indicated?
2. Are any safety devices or switches illegally disabled?
3. Is there any potentially dangerous horseplay in lab. areas? (distracting, teasing, startling)
4. Is there a tendency to move or rearrange heavy equipment with insufficient personnel?

Check List for Safety Representatives

1. What area is covered?
2. How much time (average) is devoted to safety work?
3. What special safety procedures are in effect in area?
4. Do you know all the men personally who work in your area?
5. Are there safety discussions in your area?
6. Does it appear to you that safety attitudes are improving?
7. Do you need more help from your department safety engineer?

Check List for Supervisors

1. Are your new employees always introduced to the safety representatives and to the Safety Guide? To what extent are they acquainted with the latter?
2. How are you cultivating safety thinking and safe behavior in your group?
3. Do you provide the implementation for safety suggestions?
4. Are there any current safety organization recommendations that have not been finally acted upon?
5. How often is performance of employees observed from a safety standpoint?
6. Each time a job is reviewed do the safety aspects receive their share of attention?

STOP SHOCKS

With This Amazing New
POW-R-SAFE
TOOL TESTER



- Instantly, Accurately Detects Unsafe Conditions in Electric Tools, Extension Cords
- Stops Accidents BEFORE they Can Occur

Put a stop to injuries caused by electrically defective tools, with the new POW-R-SAFE Tool-Tester. Simple to operate. Complete safety-check made in less than 10 seconds. Equip with this sensational, protective device NOW ... it will pay for itself in a hurry. Write for details.

FENDALL COMPANY
 4631 N. Western Ave., Chicago 25, Ill.

Calendar Contest Winners for June

First prize in the National Safety Council's Safety Calendar Contest goes this month to Richard Rondi, plant purchasing agent, Frankfort Distilleries, Inc., Louisville, Ky. The theme in the contest was an ounce of prevention is worth a pound of cure. Mr. Rondi's line was adjudged the best of all those submitted. It was:

Your car care is your care of "you."

Second prize went to Roger W. Dana, quality control inspector, Kimberly-Clark Corp., Neenah, Wis., for this line:

Seems a check-up from neck-up is due.

Third prize was awarded to Karl Duerr, Reclaiming Dept., International Business Machine Corp., Endicott, N. Y., for the following line:


'Tis his thinking, we think, needs review.

The June limerick was:

*The fine car of Big Shot McPew
Was a mark of success in his view.
But his car may be wrecked
By his check-up neglect.*

Thirty \$5 awards were issued to:
William A. Charles, stock control-

Put
INVISIBLE GLOVES
on your workers...



To guard their hands against irritation and infection

VESTAL
SDC

SKIN DEGERMING CLEANSER
with HEXACHLOROPHENE offers...

EFFECTIVE CLEANSING AND ANTISEPTIC ACTION

The answer to industrial dermatitis is effective cleansing combined with antiseptic action. Vestal—SDC (Skin Degerming Cleanser) provides both. It cleans efficiently, removing irritants such as cutting oils, lubricating oil, chemicals and solvents; it provides antiseptic protection against secondary infections arising from cuts, abrasions and chemical irritation... promoting quick healing of injured skin without crippling, infectious complications.

Daily hand washing with Vestal—SDC forms an invisible but protective film on the skin. For SDC contains the antiseptic agent, Hexachlorophene, which remains on the skin after the hands are rinsed and dried. This antiseptic film provides a continuous barrier to infection and disease transmission.

Vestal—SDC lathers instantly; quickly cleans heavily-soiled hands.

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*In Plant
or Office...*

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COSTS
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SCAFFOLDS



- **SAFE**
- **PORTABLE**
- **ADJUSTABLE**
- **EFFICIENT**

Baker Adjustable steel scaffolds enable men to do more work in less time and at less cost. Patented self-locking platform support trusses permit fast erection and dismantling. No bolts, nuts or loose parts. Complete with metal-bound plywood platform that is adjustable every 3 inches. Workmen stand at the most efficient height for their job. Baker Scaffolds give you the safe, sure, economical answer to all your off-the-floor work.



WRITE FOR BULLETIN 534
Listed under Reexamination Service, Underwriters Laboratories, Inc. Distributors in principal cities.



BAKER-ROOS INC.
607 W. MCCARTY STREET
INDIANAPOLIS 6, INDIANA

Protect Outdoor Workers *Against* POISON OAK *and* POISON IVY

For more than a decade IDU Skin Lotion has been giving outdoor workers, linemen, utilities workers, gardeners and foresters the protection they need from poison ivy and poison oak.

These two spring and summertime hazards to health and efficiency may soon become troublesome. Be prepared!

Don't let these irritating conditions develop—use IDU for their prevention.

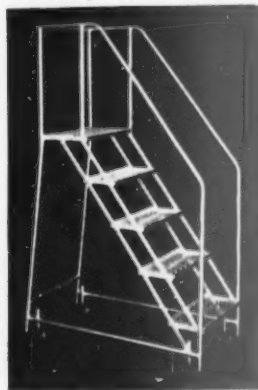
Order Now

Available at the following prices: 4 oz. bottles, \$6.00 a doz.; 8 oz. bottles, \$10.00 a doz.; 1 pint bottles, \$16.00 a doz.

Send for a free sample on official company stationery today

I.D.U. PRODUCTS CO., WAUSAU, WIS.

COTTERMAN WELDED STEEL SAFETY LADDERS For Filling Rooms—Stock Rooms—Vaults



45"—5 Step

SAFE
•
STRONG
•
EASY TO MOVE
•
EASY TO CLIMB
•
NON-SKID STEPS

New Improved design now being made from 1" diam. round furniture tubing.

Mounted on Swivel Brake Casters which allow the ladder to be rolled freely when no one is on it. When you step on the ladder the rubber cushioned legs rest on the floor and prevent rolling.

Made in 7 heights:—18" 2 Steps, 27" 3 Step, 36" 4 Step, 45" 5 Step, 54" 6 Step, 63" 7 Step, 72" 8 Step.

All are made in either 20" or 26" width.

Send for Circular No. 52-N and prices on these ladders and our full line of Wood Rolling Ladders.

Manufactured by

I. D. COTTERMAN

4533 N. Ravenswood Ave. Chicago 40, Ill.



NEW MAGNETIC SUPER-SWEEPER REMOVES "TRAMP IRON" FROM FLOORS . . . REDUCES ACCIDENTS!

Eriez new Super-Sweeper is the most powerful, economical permanent non-electric magnetic sweeper ever designed to pick up and hold dangerous tramp iron from floors, driveways, loading docks, etc. Super-Sweeper helps to keep floors clean and safe . . . reduces accidents . . . prevents tire blowouts!

PULL IT . . . Super-Sweeper's double steel tube handle with looped end easily hitches to any vehicle. **PUSH IT . . .** Super-Sweeper is powerful . . . light weight . . . easily maneuvered. **SUSPEND IT . . .** Super-Sweeper is quickly adapted for industrial fork trucks.

Four sizes (from 35½" to 71½" wide) in three magnetic strengths are available for manual or mechanical operation . . . at amazingly low cost.



Send for **FREE** Bulletin which gives specs, prices, etc.

ERIEZ Manufacturing Co.

27 MAGNET DRIVE, ERIE, PA.

ler, B.B. Chemical Co., Middleton Mass.
Virginia Russell, Glendenning Motor
Ways, St. Paul, Minn.

Max Levin, postal clerk, U. S. Post
Office, Oronomowoc, Wis.

Mrs. C. H. Bowlen, Haverhill, Mass.
(Individual Member)

Susie Mae Smith, Tuscaloosa, Ala.
(Individual Member)

H. B. Reilly, office manager, The
Montana Power Co., Livingston, Mont.
Dixie Baughman, Electro Metallurgi-
cal Co., Portland, Ore.

Mrs. Charles H. Stone, Macon, Ga.
(Individual Member)

Vivian Huffaker, E. I. du Pont de
Nemours & Co., Chattanooga, Tenn.

B. C. Sibley, recorder, Tennessee
Coal & Iron Division, U. S. Steel,
Ensley, Ala.

Mrs. Trevor T. Crawford, Col-Tex
Refining Co., Colorado City, Tex.

Arthur V. Long, Tulsa, Okla., (Indi-
vidual Member)

Harry Krug, Kansas City, Mo., (Indi-
vidual Member)

Mrs. Eleanor D. Evert, office clerk,
Sinclair Pipe Line Co., Independence,
Kans.

Mrs. R. E. Brown, Huron Portland
Cement Co., Alpena, Mich.

Robert B. Campbell, industrial engi-
neer, E. I. du Pont de Nemours & Co.,
Victoria, Tex.

Mrs. Betty M. Davis, Rosemead, Calif.,
(Individual Member)

Charles J. Ellis, supt. of production,
Socony-Vacuum Oil Co., Inc., Detroit,
Mich.

Francis C. Long, College Park, Md.,
(Individual Member)

George A. Larson, traffic field engi-
neer, Minnesota Dept. of Highways, St.
Paul, Minn.

Frances Fay, Narragansett Electric
Co., Providence, R. I.

J. R. Rowe, Universal-Cyclops Steel
Corp., Bridgeville, Pa.

Mrs. C. A. Frisinger, Sinclair Pipe
Line Co., Independence, Kans.

Mrs. C. S. Kelley, Keystone Steel
and Wire Co., Peoria, Ill.

Agness C. Lomax, Fall River, Mass.,
(Individual Member)

Albert L. Wedemeyer, draftsman, The
Pure Oil Co., Chicago.

Ernest Hopper, welder, Alpha Port-
land Cement Co., St. Louis, Mo.

Selby Wilson, electrician, Noranda
Mines, Ltd., Noranda, Que.

C. L. Barnes, Firestone Tire & Rub-
ber Co., Ltd., Christchurch, New Zea-
land

Mrs. Norman Keith, Keystone Steel
& Wire Co., Peoria, Ill.

Two boxing managers were dis-
cussing the forthcoming fight. "At
the end of the 2nd round," said
one, "your man will hit mine and
he will go down for the count."

"No, no," expostulated the
other. "Not in the 2nd round; in
the 7th or 8th. We don't want to
cheat the public."

New safety equipment for industry

Further information on these new products and equipment may be obtained by writing direct to the manufacturer or to National Safety News. Accompanying coupon is for your convenience.



Warning Signal Light

The new Mars Twin Beam, two-way, wide-angle oscillating warning signal light provides 360 degree protection. When answering calls the front light sweeps the street and intersections from side to side far ahead of the apparatus, warning all traffic of the direction the apparatus is moving. The red beam can be seen by traffic approaching intersections long be-



fore the crossing is reached. When apparatus is standing, rear light can also be used to provide protection for men and equipment from front, rear and both sides. Front light may be operated separately, or both front and rear lights may be operated simultaneously.

This signal light is also being used by industry for many applications inside the plant. Full details may be had by writing: Mars Signal Light Co., 4322 W. Chicago Avenue, Chicago.

Item No. 1

Plastic Welding Cover Plate

The Sellstrom Manufacturing Co. offers a new "Long Life" clear plastic welding cover plate, nicknamed the "thousand hour" cover plate. It is claimed that approximately 1,500 hours of service can be



expected from each of these cover plates. The clear plastic plate is not affected by acetone, benzene, gasoline or high temperatures. Bending pressure does not cause crazing. It is unbreakable and withstands pitting. The plate is of standard size, 2"

x 4-3/16" and is marketed under the catalog number PKU.

Sellstrom Manufacturing Co., 622 N. Aberdeen St., Chicago 22.

Item No. 2

Mine Roof Coating

A new mine roof coating that penetrates rock strata and forms a protective coating against moisture has just been placed on the market. The compound, sold under the name of Das-Seal, can be sprayed with any type of spray equipment or painted over the rocks, giving a lasting seal against mild sweeping water and moisture, which is a major contribution to falling matter in mines.

Das-Seal is non-toxic and non-flammable and can be applied to damp as well as dry surfaces with equally efficient results. A small portion spreads a long way and gives apparent permanent protection. For complete details write:

Dasco Chemical Co., 1620 Thames St., Baltimore, Md.

Item No. 3

Split-Joint Spectacle

Model 80 Split-joint spectacle recently developed by Watchmoke Optical provides a spectacle that can be stocked in quantity with full assurance that it will satisfy demands for eye protection for many types of eye hazards. Double bridge



design more than doubles the strength of the frame, while the one-size bridge is said to fit 90 per cent of all faces. The fit is comfortable.

The exclusive new plastic Retrax temples are easily adjusted by the wearer for comfortable fit. They are plastic throughout and said to give greater comfort around the ear because of the new "ball-chain" ear hook which fits into the cartilage behind the ear.

Lens replacement is quick and easy. The frames are available in two sizes to hold lenses 45 x 48 mm and 42 x 44 mm.

Any safety lens, prescription or plano may be inserted. Write the manufacturer for more details.

Watchmoke Optical Co., 232 W. Exchange St., Providence 3, R. I.

Item No. 4

Dressing for Asphalt Tile

A non-oily dressing, designed to pick up dust—then completely evaporate, has been developed by the Hillyard Chemical Co. to simplify daily care of asphalt tile floors. It combines a non-oil base with an effective formula that, according to its makers makes it the nearest to a perfect floor dressing available. It can be sprayed or brushed on the floor. Because of its natural affinity to dust, it immediately picks up dust particles, then evaporates, leaving no residue and providing a dust-free floor with renewed lustre.

The dressing is colorless and has a pleasant odor. It is high in coverage, and is non-flammable. For informative literature write:

Hillyard Chemical Co., St. Joseph, Mo.

Item No. 5

Maintenance Instrument

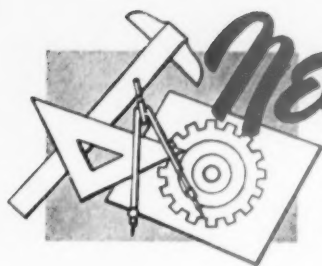
As a practical help in maintenance, testing and inspection, Anco Instrument Division has just brought out a new audio-video model of the Elec-Detec, portable



electronic instrument designed for locating noise sources in all types of mechanical equipment.

The unit known as Elec-Detec Model V includes a millimeter for checking sound impulses visually, in addition to the standard headphones for audible operation. The combination, it is stated, enables the operator to "see as well as hear" the location of the source of trouble in bearings, pistons, gears, ratchets, and other moving parts. Full details may be obtained from: Anco Instrument Division, American Name Plate & Manufacturing Co., 4254 W. Arthington St., Chicago 24.

Item No. 6



New safety equipment for industry

Manufacturers are invited to send in announcements of new products, or improved special features. Only items which can be considered as "news" to our readers will be published.

Explosion-Proof Switch

A new explosion-proof heavy duty precision limit switch, designed for uses on all types of machinery and industrial equipment in explosive gas or vapor-air atmosphere, is now available. It is listed by Underwriters' Laboratories as suitable for hazardous locations of Class I, Group C and D.

The new switch, designated IML-EL, is made so that the user may adjust the operating head to any of four horizontal positions. The roller arm assembly may be reversed to position the actuator roller on either side of the actuator arm. The roller arm is held adjustable to operate clockwise, counter-clockwise, or in both directions.

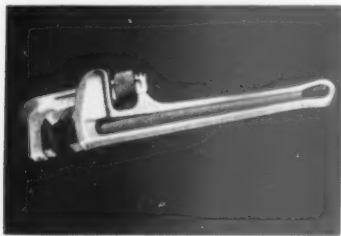
This is said to be the smallest explosion-proof snap action switch available. For full details write:

Micro Division of Minneapolis-Honeywell Regulator Co., Freeport, Ill.
Item No. 7

Spark-Resistant Wrench

A light-weight aluminum alloy pipe wrench with removable Beryllium-Copper jaw inserts is the latest to the line of Ampco Safety Tools.

Forged of an aluminum alloy, this spark-resistant wrench possesses a dense uniform



grain structure with excellent physical properties. Its tensile strength is comparable to that of steel tools. Weight range is from 15 ounces for the 10-inch size to 128 ounces for the 36-inch size.

More information will be supplied by writing:

Ampco Metal, Inc., 1745 S. 38th St., Milwaukee 46, Wis.

Item No. 8

Carton and Drum Handling

This combination carton and drum clamp can handle both types of containers without the use of skid or pallet. It is adaptable to all Elwell-Parker center-

control, sit-down fork trucks, both gas and electric-powered types.

The clamp arms shown are designed for handling load units of cartons; the slotted portion of the arms permits clamping of



standard drums without interference of the drum's rolling ribs. The clamping device is designed primarily for loads having good dimensional stability and solid containers with contents which are of a non-fragile nature. A side-shifting attachment permits accurate location of the clamp arms when picking up a load, or for accurate spotting of a load in confined quarters. Each arm of the clamp operates independently to minimize the space between loads. Both clamping and side shifting are hydraulically controlled. Write the manufacturer for additional information. Elwell-Parker Electric Co., 4205 St. Clair Ave., Cleveland 3, Ohio.
Item No. 9

Fog Nozzle

A new low-cost fog nozzle has been developed for aiding plant personnel and fire departments in fighting industrial fires. Recommended for use with all industrial hose and hose racks, this nozzle opens from a shut-off position immediately to a 160° full fog position. This vapor prevents water damage to plant equipment and inventory caused by a heavy solid stream of water; precludes the spreading of liquid fire and disperses poisonous fumes, gases and smoke as well as flammable vapor air mixtures. The nozzle has the added advantage of a double shut-off since the water stream can be stopped by turning the nozzle to the extreme right or the extreme left.

Full information is available from: Akron Brass Mfg. Co., Wooster, Ohio.

Item No. 10

Adjustable Lamp

The Luxo lamp is designed to prevent eyestrain of industrial workers. Its flexibility enables the worker to adjust the

light to any location at the desired intensity and the tension of the springs holds the lamp exactly where it is placed. The arms and shade together provide a radius of 45 inches, making it possible to have a concentrated light in any spot over a



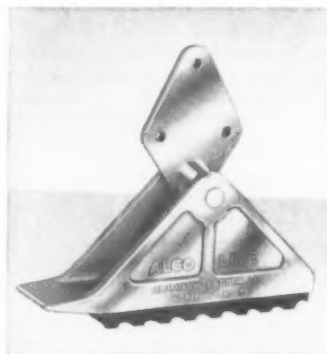
wide area. A variety of brackets are available, so that the lamp can be attached to any surface—horizontal, vertical or slanted. The lamp is listed under the Label Service of Underwriters' Laboratories. For full information write:

Luxo Lamp Corp., 290 Madison Ave., New York 17.

Item No. 11

Ladder Shoe

Aluminum Ladder Co. has announced the new Alco-Lite all-aluminum safety shoe for straight and extension ladders. The shoe is of cast aluminum and can be used



with either the rubber tread or spike on the floor surface. Because it will not throw sparks, it is suitable for use around volatile flammable fluids.

Aluminum Ladder Co., Worthington, Pa.

Item No. 12

New safety equipment for industry

Further information on these new products and equipment may be obtained by writing direct to the manufacturer or to National Safety News. Accompanying coupon is for your convenience.



Letter Changing Device

A low-cost means of mounting slotted changeable copy letters is now available in the form of a horizontal bar assembly. This device is comprised of a series of 24-inch



baked enameled mounting bars which can be easily mounted on any flat surface, such as plaster or plywood walls, metal panels or bulletin boards. An aligning tool provides for proper spacing of the bar—2 1/3" for 4-inch letters, 5" for 6-inch letters, and 7" for 8-inch and larger letters.

This new device is especially attractive to those who already use slotted letters on existing signs as they can use their regular letters on these bars.

Brochure on this new device will be sent to anyone addressing his request to: Wagner Sign Service, Inc., 356 S. Hoyne Ave., Chicago 12.
Item No. 13

Salt Tablet Dispenser

A new salt tablet dispenser which supplies heat-antidote tablets one at a time is now being marketed by the International



Salt Co. for use beside drinking fountains in offices, factories, schools and other public places.

The modern unit, which holds 1,000 salt tablets, is molded in three pieces from Plaskon urea plastic. The main housing, fitted with a transparent window, shows the current tablet supply; the removable top fits tightly to keep the contents sanitary, but unscrews easily for filling, and the dispenser mechanism, which works either to the right or left, automatically "re-loads" itself after each use. This is a product of:

International Salt Co., Scranton, Pa.
Item No. 14

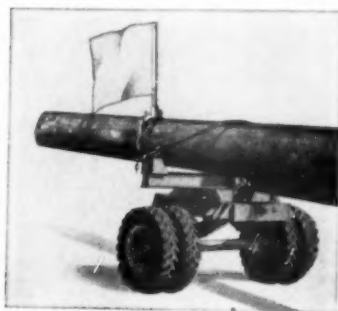
Non-Flammable Solvent

A new solvent known as Penolene 643 is said to reduce the toxic hazard to an all-time low. It contains no carbon tetrachloride, yet evaporates as fast and is claimed to be equally non-flammable. This combination makes the product suited for many uses such as cleaning motors, electrical equipment, radio parts, electronic parts, fabrics, motion picture film and as a diluent. Information and samples are available from:

The Penetone Co., Tenafly, N. J.
Item No. 15

Flag Holder

Industrial Products Co. announces a new danger flag holder for use on pole



trucks of electric service and telephone companies. The device quickly fastens around any size pole, holds flag in upright position and detaches instantly when desired to be removed. It is made of malleable iron, with chain, tension spring and locking lever. Flag is 15" x 18" in size of bright red fast color drill cloth. Mounted on 20" staff which fastens securely to the malleable iron socket by means of a ta-

pered fit and thumb type tightening screw. Full information may be obtained by writing:

Industrial Products Co., 2850 N. Fourth St., Philadelphia 33, Pa.

Item No. 16

Safety Cans

Designed for safe handling of gasoline and other volatile liquids, a new line of "Flex-O-Spout" safety cans is now available for volume distribution. These cans



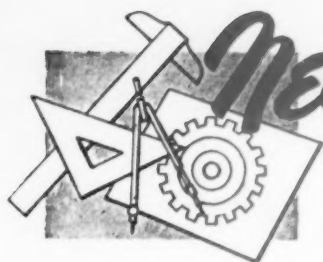
feature the "Hide-Away" flexible pouring spout that can be reversed to rest inside the can when not in use. Sturdily built of heavy-gauge steel, they are both leak-proof and rust-proof, with built-in copper screens. For all-around use, the safety can model is made in a low, streamlined design that permits compact, easy storing and prevents spilling. This model is available in 2 1/2 and 5-gallon sizes with a convenient swivel handle and built-in air vent for added safety. For full details and prices write: Truecraft Tool Co., 2425 S. Michigan Ave., Chicago 18.

Item No. 17

Explosion-Proof Flashlight

An explosion-proof, water, vapor and damage proof flashlight, the Lennan K-2,





New safety equipment for industry

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is being introduced by Lennan Products, Inc. In this flashlight, all working parts are contained in a "sealed-in-head" which "pops" in or out of the case whenever batteries or bulbs are changed. Sealed-in air-tight batteries give greater service and have longer life. It is approved for use in aircraft USAAF Approval Laboratories, Bureau of Mines and Underwriters' Laboratories, Inc. For complete details write: Lennan Products, Inc., 4407 San Fernando Road, Glendale, Calif.

Item No. 18

Wetting Agent

Firewater, a chemical penetrant, is now available in convenient and economical individual tubes. The product is named Firewater "5" and is pre-measured for



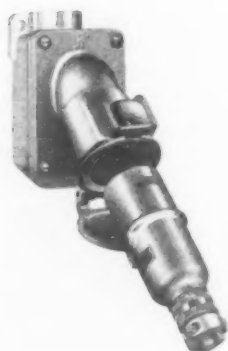
use in five-gallon capacity fire-fighting equipment. It is said that Firewater will more than double water efficiency by making it "wetter." It is recommended for use in back pumps, pressure tanks, stirrup pumps, water tanks, water buckets, or any other piece of emergency firefighting equipment. Details are available from: The Firewater Co., 1 First St., Los Altos, Calif.

Item No. 19

Explosion-Proof Plugs

The Pyle-National Co. of Chicago announces the availability of a new series of explosion-proof plugs and receptables designated EPD and ERR. Trade name Strate-Line. These new connectors are designed for the safe, reliable operation of portable electrical equipment in Class I, Group C and D hazardous location and are listed by Underwriters' Laboratories. In addition, they operate as a current-interrupting device, providing a safe means for opening and closing the circuit under load.

The new plugs and receptables have cast



aluminum alloy housings with an extra pole connected directly to the shell for completing the grounding circuit through the conduit system. All details are available by writing for Bulletin 1105 to: Pyle-National Co., 1334 N. Kostner Ave., Chicago 51.

Item No. 20

Head Protection

The Hard Boiled miner's cap was designed by miners who have to wear them every day on the job. Molded resin-impregnated glass fiber construction provides not only impact resistance and dielectric strength, but allows for flexibility of design, plus light weight.

The grooved crown is molded to the size



and shape of the lamp cord, helps prevent accidents caused by snagging cords of center-wired lamps and also gives greater head clearance. One size fits all heads with the universal size feature. Entire headband assemblies can be removed and replaced in inexpensive leather or leatherette in a matter of seconds. The manufacturer will gladly send details:

E. D. Bullard Co., 275 Eighth St., San Francisco 3.

Item No. 21

Safety Solvent

A new, low-toxicity safety solvent, designated as Teesolv No. 383, which is non-flammable and fast evaporating, is now available. This new solvent may be used with vapor concentrations in the air 10 to 20 times those permissible with carbon tetrachloride. It is a clear, colorless liquid with a pleasant odor. It contains a very low percentage of non-volatile material and was first developed for the cleaning of electronic parts. However, it is now finding many other industrial uses.

For complete details write: Tect, Inc., Cortlandt and Erie Sts. Dumont, N. J.

Item No. 22

Materials Handling

Front-end loading up to 5000 lbs. capacity is featured in the Baker-Lull Shovel-loader. Advantages claimed are fuel cost savings, low replacement costs, and 8-speed transmission that permits full throttle operation at each job speed, and designed for



use in critical conditions of mud, water and uneven ground.

The shovel-loader is available with seven materials handling tools. It will crowd and dig below tractor level, lift a 5000 lb. capacity load to 10'3", dump it at 8'6" and reach 5'10" ahead of the tractor radiator shield. Lift speed is 12 seconds; lowering speed, 9 seconds. Special double-acting hydraulic cylinder design enables the operator to shake the materials bucket thoroughly clean. For literature and price information write:

Department KP, Baker-Lull Corp., 314 W. 90th St., Minneapolis 20.

Item No. 23

Inter-Communication System

A new inter-communication system known as the Femco Pagephone provides inter-office or inter-plant telephone communication coupled with "all-hear" paging features.

The method of installation and all

New safety equipment for industry

Further information on these new products and equipment may be obtained by writing direct to the manufacturer or to National Safety News. Accompanying coupon is for your convenience.



equipment have been designed for simplicity and flexibility. One centrally located amplifier replaces the usual numerous master stations and one common cable



serves the entire system. Plug-in junction boxes make possible the addition of deletion of stations without interruption of service. Installations can be made anywhere in business or industry, from office to office, office to shop, building to building or floor to floor. Any number of independent systems may be inter-connected together.

Information about the new Femco Page-phone and other communication systems may be had by requesting the "Femco Data Kit" available from the manufacturer:
Farmers Engineering and Manufacturing Co., Irwin, Pa.
Item No. 24

Sky-Hook

One or two men can work safely and quickly at otherwise inaccessible overhead jobs with this ingenious attachment on a Yale crane truck. Basically the Tey Hydro Sky-Lift is a gigantic articulated arm



which can lift 500 pounds from the floor and hold it at any point within the upper half of a sphere 26 feet in radius, measured from the pivot point of boom attachment.

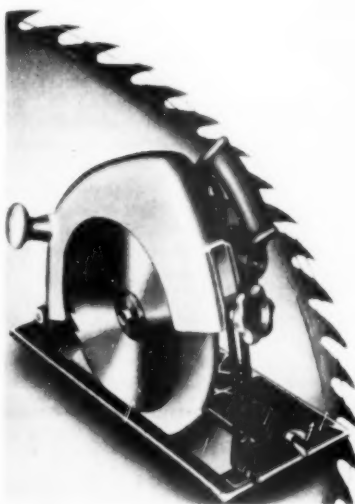
From the crane truck which serves as its solid base, it can stretch to a working height 34 feet from the ground and offer a stable platform in a complete horizontal circle. At the end of the boom are crow's nest, either one or two, each large enough for a man to work comfortably. The nest is fitted with a set of controls hydraulically operated to ensure positive and smooth action at any degree and in all directions. Write the manufacturer for descriptive literature.

Yale & Towne Mfg. Co., Yale Materials Handling Division, Philadelphia Pa.
Item No. 25

Portable Air Saw

Ingersoll-Rand Co. announces a new portable air-powered circular saw with a maximum depth of cut of 4-3/4". The S-12 saw, as it is known, has more than enough power to capably handle all jobs within its capacity range. It is powered by a Multi-Vane air motor and is designed for use on 90 psi air pressure.

The saw blade is driven through a simple



spur gear drive, which reduces the arbor length between the motor and the saw blade. As the motor is close to the center of the saw, the weight is evenly balanced between the handles, giving a well-balanced, easily-handled saw.

Maximum safety is built into the S-12 Saw. The throttle lever is located on the inside of the grip handle and the saw blade is enclosed by a housing on top and a tel-

escoping guard underneath. For further information write:

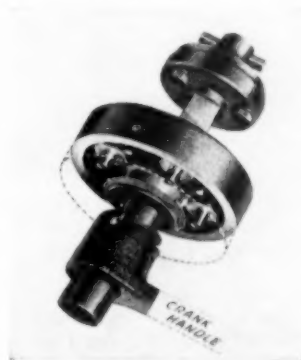
Ingersoll-Rand Co., Dept. P.T., 11 Broadway, New York 4.

Item No. 26

Safety Crank

A cranking device that reduces hazards from engine "kick back" is being marketed by Safety Crank Co.

The crank can turn only in one direction. If the engine kicks back, four cams jam against the shaft hub so the crank



cannot spin counter-clockwise. The shock of the kickback is absorbed by the crank's friction clutch, preventing damage to the engine. The crank fits any engine that is started by crank or rope pulley. A bracket adapter and rope or pulley is supplied with the crank to fit any type of engine. The device is manufactured by:

Safety Crank Company, Box 101, Centralia, Ill.

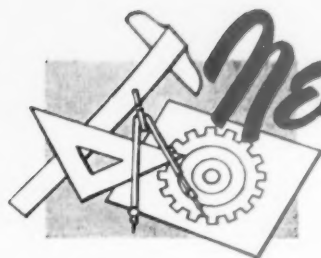
Item No. 27

News Items

Fireye Corporation, 720 Beacon St., Boston, announces the promotion of John J. Caldwell to industrial sales manager with offices in Boston. Mr. Caldwell was formerly Eastern sales manager, located at 1 Broadway, New York City.

* * *

R. E. Vicklund, manager of sales and development of Sindar Corporation, New York, manufacturer of industrial deodorants, germicides, fungicides, anti-oxidants and anti-skinning agents, announces the appointment of John R. Lyons as technical



New safety equipment for industry

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representative for the company, Mr. Lyons is a graduate of Holy Cross College where he received the degree of BS in Chemistry and Biology. He was last employed as technical representative by the Pacific Chemical and Fertilizer Co. and prior to that was analytical chemist in the Quality Control Laboratory of U. S. Gypsum Co.

* * *

The new president of Universal Manufacturing Corp., Zelienople, Pa., is J. A. Kirkpatrick. He was formerly vice-president and general manager. The company's Board of Directors also announces the election of Bernard W. Carbeau as vice-president and Robert L. Carbeau, treasurer, as assistant to the president.



Mr. Kirkpatrick, a native of Dubois, Pa., had previously been an executive with National Tube Co. He is a member of Iron and Steel Institute and the American Society for Testing Materials.

* * *

Election of Robert L. Reeves as vice-president in charge of sales, J. B. Ford Division, Wyandotte Chemicals Corp. has been announced by Robert B. Semple, president. Mr. Reeves has been general manager of sales for the Ford Division since joining Wyandotte in January, 1950. He was born in Pennsylvania, was reared in Georgia and completed his education at Georgia Tech in Atlanta. He came to Wyandotte from the B. F. Goodrich Company, Akron.

* * *

Fine Organics, Inc. announces the appointment of Joseph G. Putman, 3124 Lexington Road, Montgomery, Ala., as its exclusive selling agent for its aviation-

industrial line, in the States of Alabama, Georgia and its industrial line in North Florida.

* * *

J. W. Stonehouse is a man who has spent the better part of his 84 years selling safety for American workers. Thousands of industrial workers have been protected through the use of accident prevention signs fathered by Mr. Stonehouse.

In 40 years, his company, Stonehouse Signs Inc., of Denver, Colorado has



grown from a one-room, one-man sign shop with a single mail order customer to an organization which now serves thousands of customers throughout the nation. As a pioneer in this specialized sign field, Mr. Stonehouse, known as "J. W." to thousands of customers, designed the original octagonal traffic sign now universally recognized as the sign requiring vehicles to stop. Now, largely through his efforts, all accident prevention signs are standardized in shape and color, which makes it easy for anyone to distinguish between the various kinds of hazards.

Early in his career Mr. Stonehouse married his secretary, which was the beginning of a marital and business partnership that is still going strong. Due to ill health in 1926 and on his doctor's advice Mr. Stone-

house turned over active control of the business to Mrs. Stonehouse. She became the president of the company, a post she holds today. Although they now spend a great deal of time in California, the Stonehouses keep in close touch with the Denver plant via daily air mail reports.

Besides taking an active part in supervising the business, J. W. still devotes as much time as possible to two interests that have always been close to his heart—the Masonic order, and people. He has yet to meet the man he doesn't like. And, without exception, everyone who has known J. W. considers him the kindest man they have ever met. Here you feel is a man who has actively practiced the Golden Rule.

* * *

Shown here is a portion of the new branch plant and offices of the B. F. McDonald Co. at Houston, Texas. During the recent opening ceremonies, the State of Texas conferred honorary citizenship on



B. F. McDonald, president of the company. The McDonald Co., manufacturers and distributors of safety equipment, has its headquarters in Los Angeles, also maintains offices in San Francisco. The new Houston offices and plant afford a greater scope of service to the Southwest.

NATIONAL SAFETY NEWS

425 N. Michigan Ave., Chicago 11, Ill.

Please have complete information sent to me on items circled:

AUGUST, 1953

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
25	26	27									

NAME

TITLE

COMPANY

ADDRESS

CITY

STATE

NEW



IDEAS

Trade publications

in the safety field

These trade publications will help you to keep up-to-the-minute on new products and developments in industrial health and safety equipment. They are free and will be sent by manufacturers without obligation to readers of NATIONAL SAFETY NEWS who are responsible for this work. Send in the coupon below checked for the publications you desire. Please make your requests promptly.

1. **Industrial Laundering Service:** This 24-page roster of Industrial Launderers will make it easy to locate a reliable laundering service in your community. Time saving details on scientifically-cleaned work clothes are also available. Institute of Industrial Launderers.

2. **"The Coffee Break in Industry":** Survey covering 1,160 companies in 45 states to determine what is the effect of the coffee break on productivity, morale, safety and related subjects. Pan-American Coffee Bureau.

3. **Skin Cleanser:** Literature describes how to guard against industrial dermatitis. Tells the use of skin degerming cleanser which contains the antiseptic agent, Hexachlorophene, to guard against irritation and infection. Vestal, Inc.

4. **Air Handling:** Catalog 600 covers the entire line of air handling, air conditioning and electronic air cleaning products. It gives applications throughout industry. Reference data, tables and formulas for figuring requirements and applying equipment included. Westinghouse Electric Corp.

5. **Floor Plate:** Booklet showing the advantages of steel floor plates that provide a non-slip friction surface for safe footing. Assuring maximum safety, and full support, it is easily cleaned, formed and fabricated. Jones & Laughlin Steel Corp.

6. **"Sterilizers for Industry":** Catalog C-113 describes the latest procedures in the sterilization of pharmaceuticals, packaged food products, surgical dressings and bulk materials such as wools, synthetic fibres, seeds, etc. Diagrams, engineering data included. American Sterilizer Co.

7. **Floor Patch:** Helpful chart gives instructions for successful patching and resurfacing of worn concrete floors. The Master Builders Co.

8. **"What's New for the Laboratory":** 16-page brochure describes a new line of industrial balances, a number of polyethylene aids, a utility water bath, duplex heater, penetrometer, wet test meter, laboratory glassware washer, etc. Scientific Glass Apparatus Co., Inc.

9. **Safety Signals and Equipment:** Folder gives descriptions and prices of signs and equipment designed for functional use in the plant and on the highway. Featured are signs for accident prevention, warnings of electrical or mechanical hazards, directional, no smoking and fire prevention, traffic control, etc. Eastern Metal of Elmira, Inc.

10. **Loading-Dock Bumpers:** Bulletin describes rubber bumpers for the trucking and warehouse industry. Describes how bumpers help prevent damage to truck bodies, and eliminate dock repairs. Durable Mat Co.

11. **Air Handling and Conditioning Equipment:** New service manual shows how to properly install and service fans, blowers and air conditioning units. Clarage Fan Co.

12. **Fire Extinguishers:** 16-page, 2-color booklet describes the company's line of carbon dioxide fire extinguishers. Explains the value of carbon-dioxide as a fire control, lists the various types and special sizes of extinguishers. Randolph Laboratories, Inc.

13. **"Solving Roof Problems":** 32-page brochure is illustrated by photographs, drawings and diagrams, and thoroughly explores such subjects as the various types of roofs, how they are built, what factors enter into their deterioration, how roof troubles can be diagnosed and treated. Tremco Mfg. Co.

14. **Water Coolers:** Folder illustrates electric drinking water coolers. Types shown are: models with hand control, models with foot control, compartment types and remote coolers. Cordley & Hayes.

15. **Electro-Conductivity Analyzer:** Booklet describes the analyzer designed for the analysis of gases and vapors which will ionize either directly in water, or when decomposed by heat. Booklet describes the mechanical principles involved in the analyzer's operation, and typical applications. Davis Emergency Equipment Co., Inc.

16. **Safety Grating:** Booklet shows where you can use safety floor grating and stair treads. Charts and tables, construction details, installation information included. The Globe Co.

17. **"Safety Marking Tools":** Catalog No. 100 features devices designed for unusual marking applications and describes stock letter and figure stamps, holders, branders, etc. M. E. Cunningham Co.

18. **Sound Signals:** Catalog illustrates and describes special types of signal equipment for industrial, mine, outdoor and hazardous locations. Types shown are: howlers, horns, buzzers and sirens. Benjamin Electric Mfg. Co.

19. **Load Limiters:** Pamphlet describes Load Limiters, designed to prevent movement of elevator car when overloaded. The Load Limiters weigh the load automatically, also has a warning light signal that comes on if the elevator is overloaded and cannot be operated till overload is removed. Montgomery Elevator Co.

20. **Floor Machine:** Here is a 4-page pamphlet on maker's floor machines. Parts illustrations, specifications, and applications included. Hild Floor Machine Co.

21. **Stamp & Die Works:** Catalog No. 53 illustrates and describes marking devices and equipment. Included are: coining dies, machine engraving, marking machines, steel stamps, stencils, etc. Newark Stamp and Die Works, Inc.

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Advertisers' Index

A	O
Alan Wood Steel Co. 71	Onox, Inc. 85
Aljay Manufacturing Co., Inc. 82	
American Chain & Cable Co., Inc. 54-55-58	
American Industrial Safety Equip. Co. 103	
American Optical Co. B.C.	
American Tel. & Tel. Co. 45	
Ansul Chemical Co. 45	
Armour and Co. 65	
Atlas Industrial Corp. 102	
B	R
B-Y's of California 114	Reece Wooden Sole Shoe Co. 89
Baker-Ross, Inc. 105	Rockwood Sprinkler Co. 12
Bashlin, W. M., Co. 84	
Bausch & Lomb Optical Co. 14	
Bethlehem Steel Co. 10	
Blaw-Knox Co. 15-80	
Bomgardner Mfg. Co. 95	
Bullard, E. D., Co. 9	
C	S
Cambridge Rubber Co. 104	Safety Box Toe Co. 6
Chesebrough Mfg. Co., Cons'd. 69	Safety First Supply Co. 94
Chic Maid Hat Mfg. Co., Inc. 114	Safety Tower Ladder Co. 86
Chicago Eye Shield Co. I.B.C.	Sales-Aide Service 81
Chicago Hardware Foundry Co. 96	Scott Aviation Corp. 60
Chicago Watchclock Co. 51	Stonehouse Signs, Inc. 53
Clark Equipment Co. 75	Surety Rubber Co. 103
Columbus-McKinnon Chain Corp. 73	
Coppus Engineering Co. 4	
Corbin Cabinet Lock Div., American Hardware Corp. 84	
Cotterman, I. D. 106	
C-O-Two Fire Equipment Co. 49	
Cover, H. S. 88	
D	T
Davenport, A. C., & Son, Inc. 80	Tamms Industries, Inc. 114
Dayton Safety Ladder Co. 94	
Delta-C & S Air Lines 67	
Dockson Corp. 86-87	
Dorsey Saf-T Shoe Co. 59	
Dupont, E. I. de Nemours & Co. 5	
E	U
Employers Mutuals of Wausau 72	Union Wire Rope Corp. 76
Eriez Manufacturing Co. 106	U. S. Safety Service Co. 81
F	Universal Mfg. Co. 95
Fendall Co. 104	
Finnell System, Inc. 41	
G	V
General Bandages, Inc. 93	Vestal, Inc. 105
Globe Co. 93	
Gro-Cord Rubber Co. 97	
H	W
Halperin, A. E., Co., Inc. 87	Willson Products, Inc. 1
Hannifin Corp. 65	Wright Hoist Div., American Chain & Cable Co., Inc. 58
Hood Rubber Co. 51	Wyandotte Chemicals Corp. 74
Hy-Test Div., International Shoe Co. 16	
I	
I.D.U. Products Co. 106	
Industrial Gloves Co. 90	
Industrial Products Co. 92	
Institute of Industrial Launderers 90	
Iron Age Div., H. Childs & Co. 13	
J	
Johnson Ladder Shoe Co. 85	
Joy Manufacturing Co. 8	
K	
Kidde, Walter, & Co., Inc. 7	
Kimberly-Clark Corp. 83	
Klein, Mathias, & Sons 70	
Knapp Bros. Shoe Mfg. Corp. 82	
L	
Legge, Walter G., Co., Inc. 47	
Lehigh Safety Shoe Co. 8	
Leschen, A., & Sons Rope Co. 79	
Lowery Brothers 69	
M	
McAn, Thom, Safety Shoe Div. 11	
McDonald, B. F., Co. 96	
Medical Supply Co. 91	
Miller Equip. Co., Inc. 78	
Mine Safety Appliances Co. I.F.C.-102	
N	
National Safety Council 98-99-100-101	

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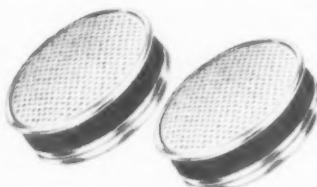


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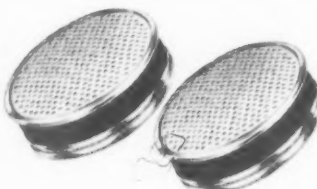
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